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From the Old Colony Memorial.

A DISSERTATION

On the course of tillage most suitable for soils in Plymouth County, and the rotation of crops, most conducive to the interest of the inhabitants.—Read before the Plymouth County Agricultural Society, at their annual meeting at Bridgewater, October 15th, 1834, by ANTHONY COLLAMORE.

(COMMENCED IN OUR LAST.)

By numerous other experiments he ascertained that this excretion takes place chiefly during the night. As it is well known that the light of day causes the roots to absorb their juices, it is natural to suppose that during the night absorption ceases and excretion takes place. By placing one root of the plant in pure water, and another in a weak solution of acetate of lead, he found that a portion of lead had been absorbed and deposited by the branch which dipped in the pure water, thereby proving that plants employ the excretory powers of their roots to get rid of hurtful substances which they may have imbibed. Similar trials were made with lime water, and a weak solution of marine salt, with a like result.

There can be no doubt, then, that plants have the power of rejecting by their roots, soluble salts, which are injurious to vegetation. An interesting detail of an experiment on one particular family of plants will here be given.

"*Leguminous Plants.*—The only plants which he tried of this family, were peas and beans. They live and grow well in pure water. After some time, the liquid being examined, has no sensible taste, its smell is faintly herbaceous. It is quite clear, and almost colorless in kidney beans, (haricots) more yellow in peas and common beans, (fabas). The fluid, when examined by chemical tests, evaporation, &c., is found to contain a matter very analogous to gum, and a little carbonate of lime. It was found that when the water in which these plants had lived was pretty well charged with this excrementitious matter, fresh plants of the same species soon withered in it and did not live well. To ascertain whether this was for want of carbonic acid in the fluid, (which plants derive from the earth as well as from the air,) or from the presence of the excreted matter, which they repudiated, the author put into the fluids some plants of another family, and especially wheat. This lived well, the yellow color of the fluid became less intense, the residue was less considerable, and it was evident that the new plant absorbed a portion of the matter discharged by the first. It was a kind of rotation experiment performed in a bottle, and the result tends to confirm the theory of De Candolle. The author would infer that wheat may follow with great advantage a crop of beans. It is not impossible that by experiments of this kind, results may be obtained of practical importance to agriculture. The inferences which the author deduces from his experiments, (acknowledging, however, that more extended trials on a greater number of families and individuals are desirable,) are 1st, that the greater number of vegetables exude by their roots substances unfit for their vegetation. 2d, that the nature of these substances varies according to the families of the plants which produce them. 3d, that some being acid and resinous, may be injurious, and others being mild and gummy, may assist in the nourishment of other plants. 4th, that these facts tend to confirm the theory of M. De Candolle."

On this theory may be explained the ameliorating effects of the locust tree on sandy and barren soils; as the locust trees grow and extend their roots, the land becomes covered with a thick growth of grass, showing by its verdure that the roots fertilize the soil. Also why some plants are said to be poisonous to the soil; the excretion from the roots being injurious to the growth of the same plant or the same family of plants, and perhaps to some others, while it may prove salutary to the growth of some other tribes.

We now come to the principles which should govern the succession of crops.

1. Two exhausting crops of the same or different grains should not succeed each other on the same soil; and hence it has been recommended as a general rule to raise alternate grain crops and green crops, which is called alternate husbandry. Others recommend that tap and fibrous rooted plants should be raised alternately. Tap roots descend into the ground in a perpendicular direction as the parsnip, red clover, &c. and are supposed to derive most of their nourishment from a considerable depth below the surface; while the fibrous rooted plants as all grains, being composed of numerous thready or fibrous parts, are nourished chiefly near the surface of the soil. But whatever may be the true explanation, it is observed by Rozier, "that every tap rooted plant succeeds very well after a crop of plants with fibrous roots, and thus alternately;" and "it is now recognized in the writings and practice of all judicious cultivators, as a rule not to be departed from, that culmiferous crops ripening their seeds should not be repeated without the intervention of pulse, roots, herbage, or fallow."

2. The same kind of crop should not be repeated at too short intervals. If the theory stated above be well founded, the reason of this will be obvious, and experience proves the advantages of introducing different species in every course of cropping. Where land has been pastured a number of years, there may not be so much necessity for adhering strictly to this rule; but it is found by experience, that wheat and other grains degenerate, when cultivated on the same land every second year for a long period. It is said green crops, beans, peas, potatoes, turnips, and especially clover, become all of them much less productive, when they come into the land every second, third or fourth year. But what the interval ought to be, has not yet been determined, and probably cannot be until further discoveries are made in the philosophy of vegetation. It is also found advantageous to change the variety as well as the species; and even the seed of the same variety; thus it has been found beneficial to obtain the seed of Indian corn, in some cases, from a colder climate, while potatoes and oats are said to flourish best if the seed be brought from a warmer latitude. Also wheat, oats, &c. which are grown on a clayey soil, are more productive when the soil is changed and they are sown on a sandy soil.

Crops should also be so arranged, that the labors of cultivation should proceed in regular succession. Thus it will not answer in any case to sow all winter or spring crops, as the harvest would come on all at once; but by cultivating a variety of plants, the labor both of seed time and harvest is rendered easier, and the work is more likely to be done well and in season.

Another circumstance to be attended to is the nature and state in which the manure is, when applied to the land, in order that the first and all succeeding crops should be supported in the best and most effectual manner, by the change which the manure is always undergoing, till it is united and incorporated with the soil; and that those parts, not suitable for one kind of crop, may be converted into nourishment for the next, and so on in the same manner. As a general rule, manure in the unfermented state should be applied to the hoed crops; for when applied to the grains, it causes such a luxuriant growth that the grain is not well filled—in common language, it runs too much to straw or stalks. Marle, marsh mud, seaweed and marine manures, may be used for all crops; as well as the stimulants, ashes, lime and gypsum. The two last are, however, said to be most beneficial when applied to those crops in which lime is found to be a constituent part of the plant, and therefore essential to its growth, as wheat, clover, &c.

Crops should also be suited to the soil, climate, and demand. Thus the course of crops adapted to the low, moist, and clayey soils, is not the most profitable to cultivate on dry sandy soils and vice versa. Also, the course of tillage proper for the climate of England, and the rotations pursued there, cannot be introduced with advantage in this country. In the former, the mildness of the climate permits the farmer to feed off his turnip crops on the ground, by which the soil is much enriched; while here, the expense of gathering, securing, and feeding out such crops, forms the greatest objection to their cultivation.—In Great Britain they cannot cultivate our maize or Indian corn, and have no other crop which yields so rich returns in food for men and animals, and leaves the soil so free from weeds, and so favorable to be succeeded by a crop of grain. That the farmer should cultivate those crops suited to his wants and the state of the market is too evident to need illustration.

Having explained the general principles necessary to be taken into view in raising crops, we come now to consider more particularly "the course of tillage most suitable for soils in Plymouth County, and the rotation of crops most conducive to the interest of the inhabitants." On the present occasion, we shall arrange the kinds of soils, and the crops most suitable for each, under three divisions.

1st. The low, moist, clayey and swampy soils, which are most suitable for grass.

2d. Those of the rich, dark, loamy kinds, equally suitable to produce grain or grass.

3d. Light, sandy soils, which are easy of cultivation, and produce most naturally grain; but which ought to be subjected to a course of alternate mowing, or pasturage and tillage, or what is termed *convertible husbandry.*—This kind of soil is most abundant in this county.

1st. Under the first division may be ranked the

low, swampy soils, which naturally produce the sour and fresh grasses, and the fresh meadows, which, by draining and cultivation are made to produce large crops of the cultivated grasses. These should always be kept in grass;—and dressed often with compost manure suited to the soil, and when they cease to produce a good crop of grass, the sward should be turned over by the plough, in the month of August, rolled with a heavy roller, liberally covered with compost manure, harrowed lengthwise of the furrow, seeded with grass seed and rolled again. In this way these soils may be kept in a profitable course of cultivation without tillage crops. These soils may produce, in a dry and favorable season, large crops of corn and potatoes, but in a wet season the labor would not only be lost, but the crop also.

2d. Under the second division may be ranked the dark rich loams, which being equally favorable for grain as for grass, have in many instances been exhausted by continued grain crops. Taking into consideration the price of labor, and the expense of raising grain crops in this county, and the price English hay usually commands, these soils are more profitably kept in grass. But as it may be necessary to seed the land anew as the cultivated grasses run out, and to enrich it by turning in and mixing with the soil the vegetable substances collected and growing on the surface, the practice of recruiting lands adopted by Mr. Elias Phinney, of Lexington, and Mr. William Clark, Jr. of Northampton, is recommended to the farmers of this county, as combining economy in labor with profitable results. Their methods and the result of their experiments, will be concisely related:—"Mr. Phinney's experiment was made on a field of two acres, which had lain three years to grass, and the crop of hay so light as to be worth not more than the expense of making. Having ascertained, by weighing the grass and roots, from a single square foot, that an acre would give over twelve tons and a quarter of vegetable substances to the acre, his object was to turn this to good account, convinced that a great part of it was exposed to useless waste by the usual manner of ploughing, cross ploughing, and harrowing.—The sward was turned over by the plough as smoothly as possible, the outside furrow slices cut into suitable pieces, and carted and placed in the centre of the ploughland;—the land is then rolled hard with a loaded roller, and harrowed lengthwise, the furrows so lightly as not to disturb the sod. After carting and spreading on twenty loads of compost manure to the acre, it was harrowed again; and corn planted in drills upon the furrow, at the usual distance and parallel with the furrows. At hoeing time the surface was stirred by running a light plough between the rows, but not so deep at any time as to disturb the sod; and the practice of hilling up the corn is to be carefully avoided. As soon as the corn was harvested, the stubble was loosened up by running a light horse plough lengthwise through the rows, the surface smoothed with a bush harrow, and one bushel of rye to the acre, with a sufficient quantity of herdsgrass seed and red top, was then sowed, and the ground again harrowed and rolled. The corn crop yielded by estimation 70 bushels to the acre, the rye on the two acres measured 69 1-2 bushels, and over five tons of straw, and the hay mowed the next year was judged to be two and a half tons to the acre. Thus with one ploughing, and the aid of twenty cartloads of compost manure to the acre, he obtained two crops of grain, and stocked the land down to grass."

Mr. Clark's method is similar.—"On one acre he planted potatoes instead of corn, and after harvesting the potatoes and removing the tops and weeds, he lightly ploughed the land, and sowed herdsgrass and clover, and harrowed and rolled, without sowing any grain. The grass seed came up well and grew finely; but the clover was much winter-killed by the ensuing winter; the herdsgrass and remaining clover gave two crops of one ton each, and large crops the following year. So that with one ploughing and a light dressing of manure, he had a fair crop of potatoes, and grass, making by estimation eight tons of hay from one acre of ground in four years. His next experiment was commenced in 1832, on a piece of about 8 acres, in the same field with the other. The soil was lighter and more sandy, and had formerly been reduced by excessive workings, but latterly it had recruited by neglect giving only about half a ton of hay per acre.—This piece was turned over and managed in the method before stated; the corn planted in rows three feet apart each way, and stirred between the rows by the harrow and hoe.* In order to get in the clover early enough to have it stand the winter, before it was harrowed for the third time, four quarts each of herdsgrass and southern, or June clover, with eight quarts of red-top seed were mingled and sown on an acre. The grass seed came up and grew well, and by the time the corn was harvested, had covered the ground almost entirely. In the spring of 1833, after the ground had become dry, it was rolled for the purpose of crushing the corn stubs, and levelling for the scythe. The clover came out finely, and with the herdsgrass and red-top, made a large growth of each nearly equal quantities.—The first crop gave a product by estimation of two tons to the acre, of the best quality of hay, and the second cutting, or rowen, gave an average as estimated, of one ton to the acre. A few tons of the first crop were sold for thirteen dollars, and the second at ten dollars per ton, giving, if the estimate be correct, thirty-six dollars per acre, as the proceeds of one year's crop. The highest price the land has ever been sold for, was thirty dollars per acre, and before these experiments were commenced, it was reputed so poor, that no one could be found willing to cultivate it on shares, with the privilege of managing it in his own way." We have been thus particular in describing their methods and the results, because if only one half such crops can be raised in this county by similar management, it would be worth the attention of every farmer. By this method the land would be seeded anew with little expense of labor, before it was exhausted by continual cropping, and kept constantly covered with herbage, and thereby protected from the wasting influences of the sun, wind, and rain.

Another course recommended and practised by the celebrated Earl Stimson, of Galway, N. Y. has been often quoted as showing the wonderful effects of good husbandry. This practice, by which his crops have been more than quadrupled, is to turn over the sod in the fall or spring, spread eight or ten tons of barn yard manure on an acre, and then to plant with corn; and to follow the corn with barley and grass seeds, putting three pounds of clover and four of timothy seed on an acre; then let it lay two years to grass: then to go over the same rotation of crops, and his third rotation was first wheat, second corn, third barley to seed down with, applying about the same quantity of manure every time he turned over the sod. —In this way, in the course of twenty years, he got some of his fields to yield from 80 to 100 bushels of corn, 35 to 40-bushels of wheat, 50 to 60 of barley, and from two and a half to three and a half tons of hay per acre, and with less labor except in harvesting, than when he raised only about one third or one quarter as much.

[Remainder necessarily deferred to next No.]

* Stirring the ground between the rows of corn, by the plough and harrow, for the purpose of level cultivation, as recommended by Messrs. Phinney and Clark, is much more effectually done by the *Cultivator*, which has lately been introduced into some parts of this county, which is so constructed as to raise and pulverize the ground, leave it level, and in fine tilth, and at the same time destroy the weeds.

From the Southern Agriculturist.

ON FATTENING CALVES AND LAMBS.

The manner of procuring Lamb and Veal of a very fat and superior quality, as practised in England, and partially by graziers for the Philadelphia market, does not seem to be noticed in works on agriculture, in a manner worthy of the subject. With a view of impressing the importance of it upon the minds of our planters and farmers, both in reference to the profit to be derived to themselves from it, as well as the improvement of our market, which ought to be a consideration with every public spirited farmer, we shall give such details furnished to us in a conversation with a gentleman of some experience, and apparently well acquainted with the whole *rationale*, as will place the subject within the reach of every one.

All animals, in health, being high fed, and debarred from exercise, become fat—to this, in the human species, there are many exceptions; but these exceptions arise from the fact, that man as an intellectual being, is operated upon by the influence of his mind, and when that becomes disturbed by the cares of life, his physical faculties, particularly those of his digestion, become impaired, and however high he may feed, and lazy his habits may be, food will appear to do nothing more than to sustain life, without increasing his bulk. With other animals such is not the case; their wants, limited to few, nature has bestowed upon them, in a few gifts, the ample means of supplying, and hence, there are no circumstances but injury, ill health, or mismanagement, that can prevent them from becoming fat when properly and highly fed, and suffered to remain in indolence.

From the mildness of our winters, and spare labor upon our plantations, there is no portion of this country that affords greater facilities for the fattening of calves and lambs for our market than Carolina, and yet that market bears ample testimony of the gross and palpable negligence of those whose interests ought to excite them to exertion. Any one in the habit of buying his provisions, must remark the general inferiority of the veal and lamb brought to the Charleston market; we seldom see a piece of either above mediocrity, and that considered so rare, that an enormous price is demanded, and frequently obtained for it. This would not be the case, were our planters and farmers to turn their attention to this subject, which by improving the quality, would increase the consumption, and consequently their profit, by a ready market for this portion of their stock.

The method pursued in other countries, and

which can be so easily obtained in ours, is this:—the calves, shortly after they are dropt, and when they have attained sufficient strength to run and skip about, are shut up in a very dry and clean pen, about nine or ten feet square, being of a size sufficient to contain six or nine calves. A small manger, sufficiently low to enable them to reach the food placed in it, must be fixed in the centre of the pen; in this manger their food, consisting of ground Indian corn, (not sifted,) must be daily put, not more than they can consume; a small bundle of fine hay tied up, and a lump of chalk should be placed within their reach, the former for them to nibble at, the latter for them to lick. This occasions an increase of appetite in them for their mother's milk, and contributes vastly to the fattening of them; the confinement prevents them from interrupting the increase of fat by the exercise they would take in their playful gambols if let loose. The chalk also has a tendency to correct the acidity in their stomach, which frequently produces a looseness in their bowels very embarrassing to the process. The cows are kept in stalls separately, but not wholly confined, the calves are led to them every morning and evening, and having sucked their fill are replaced in their pens. The calves are thus taught to suck any of the cows; this, however, is not necessary when the cows are regularly fed, unless it is desired to have a calf of extraordinary size, by permitting it to suck longer than usual. The higher the cows are fed the better, therefore good hay, pumpkins, and steamed potatoes, should be furnished them with an unsparing hand; the nourishment of the potatoes is much improved by mixing them with hay tea; and where it can be procured flaxseed jelly; this being a scarce article in this section of the country, may, perhaps, be dispensed with, without any visible difference. In thus improving the quality and value of veal, the old stock becomes of importance, for the process in relation to the calves being effected in the course of from six to eight weeks, the butter which the cows afterwards yield, is of a beautiful yellow color, firm texture, and remarkably rich, this is the natural consequence of the feeding of the cows during the time of the fattening of the calves.

Those who pursue the process we have above detailed, in order to make the veal white, in clear weather, bleed the calves in the neck every third day, until their eyes indicate an approach to faintness; this must be done in the middle of the day. This animal appears to be peculiarly subject to plethora, therefore it should be moderately fed at first, and some blood taken from them, whenever there appears in them a loss of appetite.

In fattening lambs, the ewes require considerable attention; they should be fed upon a rye-patch or turnip bed, or food of similar character. The lambs, as fast as they are born and run alone, must be shut up in a dark stall, the size of which must correspond with the number of lambs to be attended to; a trough sufficiently low for them to eat from, must be placed in some convenient place within the stall, which must be supplied daily with Indian corn-meal and bran; within their reach must be hung up a small wisp of fine hay. Adjoining this stall there must be a larger apartment, into which the ewes are to be turned two or three times a day to suckle the lambs, and must be permitted to remain with them all night. Early in the morning, and before the ewes are turned out to pasture, the lambs must be put in their dark stall, in order to debar them from exercise; and having no other amusement but that of the glutton, will nibble so much of the hay, and eat so much of the Indian corn-meal, as to make them excessively thirsty, by the time they are to be suckled by the ewes, which will make them grow extraordinary large and fat in a short time.

There is considerable advantage derived from this mode of treatment, in the lambs indiscriminately sucking the ewes, without reference particularly to their own dams; because, when the lambs grow and gain strength, they are able to consume more milk than can be afforded by a single ewe, particularly those that have more than one lamb. Another advantage derived is, when all the lambs of a ewe are killed off, she will continue to suckle the rest as before, thus giving additional nourishment to the surviving lambs.

The process, above detailed, is so simple in its character, as to be within the reach of every one disposed to make the experiment; one that will insure both amusement and profit, and which may safely be confided (under the eye of the master,) to such negroes as could not do much in the field. Our Island planters have a favorable opportunity of stocking our markets with the finest small meats, almost without an exertion. The exhibition of our markets in the summer months, should display the finest specimens of these articles, yet there is scarcely a piece of meat of either of the above descriptions brought to market at that season, that may be compared with the inferior kinds of the North. This is a reflection upon a land like ours, abounding with luxuriant herbage and roots, and speaks a language not to be misunderstand, that there is a gross deficiency in the energy of our planters and farmers in this branch of their agricultural pursuits. S.

Charleston, Dec. 14, 1834.

TOP DRESSING WITH DRY STRAW.

It is a general practice in this neighborhood to apply the wheat-straw dry and unrotted, and often fresh from the threshing machines, as a top-dressing for the poorest parts of the clover land. It is not laid so thick as to kill the grass, and aids its growth and the fertility of the land so much, that a load of straw used in this manner, is thought much more beneficial than if it had been passed through the farm-yard, in any of the usual processes of making manure. On the farm described in the report as Wm. H. Meriwether's, (since sold to William L. Craven,) I saw a piece of land thus covered with straw, from which oats, and evidently a very good growth, had been lately reaped. Yet this growth was caused by this dry top-dressing applied after covering in the seed, and of course late, on a spot so worn as to have been otherwise very unproductive. This is certainly a very cheap mode of applying the straw, independent of its alleged (and universally admitted) superior efficacy.—*Farmer's Register.*

CHRONIC RHEUMATISM.

We are not ready to add to the number of the remedies which have been prescribed for this painful disease, without a certainty that such addition will be valuable in practice. This certainty we are convinced will attend the remedy it is the object of this article to bring before the profession. It is a mixture of equal parts of the balsam of sulphur and spirit of turpentine. Six drops of this mixture may be given morning and evening, and the dose increased two drops a day until it produces stranguary, when the dose must be diminished a little and continued until the disease is removed. We have been recently informed of the good effects of this mixture in a great number of instances, and one very remarkable case has fallen within our notice, in which the disease in its worst form, vanished before it in a few weeks, although the patient had been long using without advantage, the usual and other most powerful remedies for this troublesome and painful malady.—*Boston Medical and Surgical Journal.*

IMPORTANT DISCOVERY.

A surgeon of Gottengen has discovered a complete antidote to arsenic. It is peroxyd (or the red oxyd) of iron, twelve parts of which neutralize one of oxyd of arsenic. The following is the statement as given:

"The French papers state that a surgeon of Gottengen has just discovered that the peroxyd of iron is a powerful antidote to arsenic. Twelve parts of hydrate of peroxyd of iron are necessary to neutralize completely one part of oxyd of arsenic. It is prepared by pouring nitric acid into a very pure solution of the sulphate of iron, precipitated by ammoniac and well washed. Experiments with this antidote have been tried upon rabbits, and other animals, with complete success. One advantage of it is, that no injury can be done by too large a dose. In cases where large quantities of arsenic have been taken, it has been found useful first to encourage vomiting."—*N. Y. Star.*

From the Long Island Star.

MISCELLANEOUS.

There is this difference between happiness and wisdom—he that thinks himself the happiest man really is so; but he that thinks himself the wisest is generally the greatest fool.—*Lacon.*

A simile. Like a long standing cup of tea, life grows sweeter and sweeter toward the bottom, and seems to be nothing less than syrup of sugar at the last.—*Hood.*

Health. A precious gem, which, like Aladdin's lamp, is often bartered away for paltry gew-gaws by those unconscious of its value.

Offence and Punishment. A man who was imprisoned for marrying two wives, complained that he had been severely dealt with for an offence *which carries its own punishment along with it.*

A countryman reading a newspaper in Randolph (Tennesee), was asked why he did not subscribe for it, as it was a good paper.—"Why yes," replied the countryman, "I like it, it's right fine, but I thinks it's a *leetle* too *costive*." This is a new name for a newspaper.

Freedom. Dream not of freedom for the whole while you enslave the parts; the heart must be the centre of the system, the blood next circulates freely every where; and in vast communities you behold but a bloated and feeble giant, whose brain is imbecile, whose limbs are dead, and who pays in disease and weakness the penalty of transcending the paternal proportions of health and vigor.

The Creator. "Who but the Omnipotent could have formed the sun, could have marked out its destined course, suspended it without support in the blue vault, saying, 'this be thy station and this thy brilliant seat?' Could any power, save that of the Eternal, have created the earth, the moon, and all the planets? These undeviatingly perform their course within the orbits he has prescribed them."

TRANSPLANTING.

Transplanting is the changing of the localities of entire plants. It is effected by disengaging the roots from the soil, and placing them in new situations favorable to the growth and developement of the plant.

To accomplish this successfully, it is desirable that the roots be preserved fresh and entire.

The proper seasons for transplanting ornamental and other trees and shrubs, are the spring and fall. Generally in October and November of the latter period, and March and April of the former. It is commonly best in colder latitudes to remove the more delicate shrubs and trees in spring, but where the climate is not so severe, the autumn is preferable. In the latter case, the winter is not so likely to prove injurious to them.

Those which are natives of countries equally cold and rigorous with the one to which they are removed, may be transplanted either in the spring or autumn, indiscriminately. Such as are natives of warmer climates, and have become acclimated, by culture, to higher latitudes, may be transplanted in spring. They ought to have every advantage that the warm seasons can afford, previous to their exposure to the rigors of winter.

Plants transferred to a less favorable climate, should be removed at a period most favorable to them to support the change without injury. Delicate trees, when transplanted in spring, form new roots, that take firm hold of the earth during summer. Their roots become established in their position, so that there is far less prospect of injury from the severities of winter. It is a matter of little consequence, however, at which of these seasons the hardy kinds are removed.

Plants, when taken from the earth to be transferred, should be removed with much care. Should any injury be sustained by a loss or mutilation of of a part of the roots, the whole body of the plant, together with the roots, may be immersed in fresh water during a period of twenty or thirty hours, previous to setting it in the earth again.

The top is to be lessened in proportion to the loss the roots may have sustained. Otherwise the plant will perish from a loss of its wonted nourishment. The ordinary quantity of root being diminished, the exhaustion from *evaporation* will be greater than the *absorption* of the remaining portion of root, so that the plant will die by transpiration.

October and November, after the first frosts have arrested the progress of vegetation in woody *perennials*, is recommended as a proper season for *transplanting* them. Some are of the opinion, that the peach, plum, cherry, and most evergreens, succeed best when transplanted in spring.

Any trees, even the most delicate, may be successfully transplanted in autumn, if a little protection be afforded them by covering the root during the first and most trying winter. Where complete success is hoped, it is best to shift their locality in the fall, if possible.

The protection of most trees, shrubs and woody plants, may consist in spreading a few inches of litter from the stable around the trunk and over the roots.

Moss from the meadow and evergreen boughs are highly recommended for the protection of delicate plants. They are not liable to undergo decomposition during the winter, and thereby injure and destroy what they were designed to protect.

Delicate plants are sometimes supposed to be destroyed by too much protection after being transplanted, when, in fact, they perish for want of it, being killed by the alternate freezing and thawing of the earth at its surface. This difficulty might have been easily obviated by covering them with evergreen boughs or meadow moss.

When trees or shrubs are transplanted in autumn, the earth becomes consolidated at their roots, so that the radical fibres soon take firm footing in the earth, and the plant is prepared to vegetate with the earliest advances of spring.

The excavations in the earth for the reception of the roots of trees and shrubs should bear some proportion to their size. They may generally be made from four to six feet in diameter, and of about eighteen or twenty inches in depth. Large trees will require a larger opening than this, and small ones not so large.

The yellow or subsoil where they are to be located may be thrown out, and replaced at bottom with a fine mould, intermixed with a portion of good manure.

Trees transplanted should stand two or three inches deeper in the earth than they stood previous to their removal. In no case should the extra depth exceed this.

The radical fibres are to be spread horizontally in their natural position, and the soil intimately blended with them and compactly pressed about the trunk and over the roots.

No manure should be permitted to come in immediate contact with the roots, though it should be plentifully placed about them on all sides.—Should it touch them, they would be likely to sustain injury and rot.

The ground before being trodden very hard about the roots, is to be plentifully moistened by pouring water about the plant.

In transplanting evergreens, it is generally recommended previous to treading the earth about their roots, to pour several gallons of water about the trunk, and after filling in with earth, to finish by treading it as hard as possible for the space of half an hour or more. This would be a good rule to follow in regard to all trees of whatever kind.

June has been considered by many as the best month for transplanting *annuals* that are cultivated as FLORISTS' FLOWERS, and September the most suitable for transplanting *biennials*.

In transplanting plants of every description, it is desirable that as much earth as possible be removed with the roots. If this be done, there will be less danger of their suffering by the change of situation.

Though moist, cloudy weather is generally best for transplanting, it should not be done when the ground is very wet. The earth should be only moderately moist, otherwise it will be clammy and heavy.

The operation of transplanting is most successfully performed in cloudy days, and a little before evening previous to a shower. The reasons for this are obvious. If it be done when the earth is dry and in the middle of the day, plants require watering and shading for a considerable time afterwards.

If the root be small, or injured, or destitute of earth when taken up, it will require that the earth which is placed about it be made finer, and pressed more firmly, and that the plant be more plentifully watered. It will also require to be longer shaded.

Plants, transferred to pots and boxes, after having the soil pressed firmly about them on all sides, should also be plentifully watered and for some time shaded. Care is to be taken that the shell be placed over the aperture at the bottom of the vessel, otherwise the plant will perish through a superabundance of moisture. Saturation of the earth without an outlet at the bottom, will rot the root and destroy the plant.—*Florist's Manual.*

From the Northampton Courier.

HON. SAMUEL LATHROP'S ADDRESS

—BEFORE the Hampshire, Hampden and Franklin Agricultural Society last autumn, is excellent for its practical details and good common sense. We have the manuscript and are permitted to publish the whole. We shall print it entire, with the omission of some paragraphs adapted to the anniversary occasion. He says—

The science of Agriculture, taken in all its branches and departments, as usually practised in New England, is one of the most comprehensive and multifarious of all the departments of industry. Almost every farmer will find within the range of his superintendence, a great variety of soil—the wet and the dry—the cold and the warm—the fertile and the barren—the light and the heavy—the clayey and the sandy. Each of these varieties, in order to the development of its latent energies at the least expense, with the least exhaustion, and the most for the benefit of the cultivator, requires a great diversity of management in its preparation, in its cultivation, in the kind of manure which may be applied, with the greatest prospect of an adequate return, and in the nature of the crop best adapted to the soil.

We have also a great variety of crops to cultivate—different kinds of grain, grasses, fruits and vegetables. Now all these require different kinds of management in order to their successful culture; and they are, each of them, better adapted to some particular kind of soil, than to others. It is not every soil, with the most skilful culture, that will reward the labor of the husbandman with a good crop of wheat or of corn. Some soils will produce a liberal crop of grass, others will not; and among the cultivated grasses, some are peculiarly adapted to a particular kind of soil, where others will entirely fail.

The application of the various kinds of manure requires the exercise of a sound discretion, instructed by experience and observation. These various kinds are particularly adapted to their appropriate soils. While they will all produce a salutary and beneficial effect when properly applied, they will fail, or nearly so, when misapplied. Some kinds of manure will admit of a more general application than others, but none of them will admit of an indiscriminate application, but at the hazard of an almost total loss.

The rearing and the management of the different species of animals connected with our agricultural concerns, is another branch of industry, which requires, in order to its successful and economical pursuit, a variety of knowledge and skill, which can be learned only by a long course of observation and personal experience.

Besides, the business of the farmer does not, like that of the operatives in most of our mechanical and manufacturing establishments, admit of divisions and subdivisions, so that one branch of business may be assigned to one set of hands, and another to others. But the various departments of calculation, direction and execution press on, in succession, with respect to the particular objects

of the season, and every object, in its turn, claims the whole energies of the operatives. We cannot confine one set of hands to ploughing and sowing throughout the year, and another to reaping and gathering into our barns. Every branch of business has its appropriate season. It must *then* be done, or not at all. And much, very much of the pleasure and comfort, as well as the success attending the farmer's pursuits, depend on his being prepared to occupy each and every season of the year with its peculiarly appropriate business—upon his being ready, at all times, to drive his work, and not to suffer his own work to drive him. The man, who suffers one department to fall behind its season, and thus to encroach upon another, is in danger of finding every thing jostled out of place. He will be hurried and fretted in all his labors, and will inevitably meet with loss and disappointment. [*To be continued.*

EXPERIMENTS PROPOSED.

The following hints upon experiments in agriculture have been just received by the committee [of the Saffron Walden Agricultural Society] and printed, in the hope that as it is quite unnecessary, in order to arrive at a practically useful result, that any experiment should be tried upon a large scale, some of the members of the society may turn their attention to the subjects.

The celebrated De Candolle, in his Vegetable Physiology, has pointed out several ways in which persons who are engaged in various scientific or economic persuits may assist in perfecting the general theory of vegetation. To each class he proposes a separate series of experiments to be undertaken by them; and, among other notices, he lays down a few rules by which an *agricultural* experimenter should direct his researches. We would more particularly refer to the following:—

1. That a set of *comparative* experiments should be instituted, in all cases where any positive result may be decided. For instance, if we wish to know the effect which any particular treatment of the soil will produce upon a certain crop, then we should at the same time ascertain what is the effect of the soil under ordinary circumstances upon a crop of the same kind. We should not be satisfied with the results of a single experiment, but should repeat it on different soils and in different situations.

2. No remarks that are made during the progress of an experiment should be trusted to the memory, but should always be carefully and scrupulously recorded in writing.

3. The experimenter should be careful to state his facts in such scientific or technical terms as may generally be understood, or, if he uses merely local and popular language, he should so explain himself as to be clearly intelligible.

Had attention been paid in these rules, the results of many important experiments would have been available to science which are now no better than lost labor.

De Candolle has particularly alluded to the following experiments, among others, which may be proposed to agriculturists as likely to afford interesting results:—

1. To ascertain whether blue vitriol (sulphate of copper) is serviceable in preventing the rust, smut, and some other diseases in corn, which depend upon the attacks of minute fungi.

2. To ascertain the precise effects of gypsum or plaster of Paris (sulphate of lime) in agriculture.

(*a*) Whether it be equally efficacious, calcined or unburnt, in promoting the growth of green forage, as tares, peas, &c. [*Legumenosæ.*]

(*b*) Whether it be useful as a manure for any other tribes of plants.

(*c*) Whether its use hardens the seeds of the Legumenosæ so as to render them difficult to be cooked.

3. To determine, by exact and varied experiments, whether different kinds of corn intermixed in the same field will yield a greater or less produce than when grown in separate fields.

4. To prove by experiments on physiological and chemical principles, (as laid down by De Candolle,) what rotation of crops may be most advantageously adopted on different soils, and what soils, by a rotation of crops, will yield all the advantages of which the alternate system is capable.—*British Farmer's Magazine.*

ARCHITECTURE.

From the Ohio Farmer.

WHITE WASH.

As the citizens of our village have, much to their credit, turned their attention to painting and white washing the outside of their buildings, we insert the following in hopes something may be drawn from it to their advantage on the score of utility and economy.

Incombustible Wash and Stucco White Wash.—The basis of both is lime, which must be first slacked with hot water, in a small tub or piggin, and covered, to keep in the steam; it then should be passed in a fluid form, through a fine sieve, to obtain the flour of the lime. It must be put on with a painter's brush—two coats are best for outside work.

First, To make a fluid for the roof, and other parts of wooden houses, to render them incombustible, and coatings for brick, tile, stone work and rough cast, to render them impervious to the water, and give them a durable and handsome appearance. The proportions in each recipe are five gallons. Slack your lime as before directed, say six quarts, into which put one quart of clean rock salt for each gallon of water to be entirely dissolved by boiling, and skimmed clean; then add to the five gallons one pound of alum, half a pound of copperas, three-fourths of a pound of potash—the last to be gradually added; four quarts of fine sand or hard wood ashes must also be added; any coloring matter may be mixed in such quantity as to give it the requisite shade. It will look better than paint, and be as lasting as slate. It must be put on hot. Old shingles must be first cleaned with a stiff broom, when this may be applied. It will stop the small leaks, prevent moss from growing, render them incombustible, and last many years.

Second, To make a brilliant Stucco White Wash for buildings, inside and out. Take clean lumps of well burnt stone lime; slack the same as before; add one fourth of a pound of whiting or burnt alum pulverized, one pound of loaf or other sugar, three pints of rice flour made into a very thin and well boiled paste, starch or jelly, and one pound clean glue, dissolved in the same manner as cabinet makers do. This may be applied cold within doors, but warm outside. It will be more brilliant than plaster-of-paris, and retain its brilliancy for many years, say from fifty to one hundred. It is superior, nothing equal. The east end of the President's house in Washington is washed with it.

CHENAM.

Our merchants are indebted to Captain Thomas Bennett, of the New-York and Liverpool packet line, for the introduction of this article into use here. Chenam (the East India name), is made by mixing slacked and pulverized lime with whale oil to the consistency of mortar. It is so tenacious that it adheres immediately wherever applied, and is entirely impervious to water; and becomes perfectly hard in it.

It is laid on ships' bottoms with trowels, sometimes under the sheathing and sometimes between the copper and sheathing; and, in some instances in both places. The copper is put on while the Chenam is soft, and adheres to it so completely that no water passes between them; and it is said that copper in vessels which have a coat of Chenam wears nearly double the usual time.

Whale oil is used here in making it, because it fully answers the purpose, and is two-thirds cheaper than vegetable oil—but vegetable oil makes much the best Chenam, becoming after a short time as hard as a stone. It is suggested that the celebrated mortar of the ancients was made of lime and vegetable oil.

I understand that some experiments will be made here on roofs and outsides of houses, with Chenam, as it is believed it will effectually resist the fogs and frosts of our climate, which the common rough casting does not.—*New Bedford Gaz.*

GUM ELASTIC.

Mr. Geo. D. Cooper, of this city (N. York) has obtained a patent for an entirely new and most valuable application of the gum elastic, viz. to prevent leaking in ships, damage to cargoes, and preserving the timbers from rot, and also sheathing for roofs of buildings.

The places to which the gum elastic sheets or cloths, saturated with gum elastic, are to be applied, are—

1st. Between the inner part of the ribs and the inner planking.

2. Between the outward part of the ribs and the outward planking.

3. Between the outward planking and the copper.

4th. Between the deck beams and deck planking.

By this application there will be a perfect unbroken sheet of gum elastic from stem to stern, and all round the vessel, which must be impervious to water.

Such an improvement is incalculably the best protection against leakage or damage than any yet discovered. For roofs of houses it is equally valuable, to make them air and water tight. We trust that the ships now on the stocks will make the experiment before planking.—*N. Y. Star.*

Glass. French mirrors are said to be beyond competition for cheapness and beauty; but the French crystal, though whiter, wants the softness and unctuosity of the English, caused by less frequent melting.

Plated Ware. The French mode of working plated ware is more simple than the English, but the latter have the advantage in their rolled copper, costing less. The French need not fear the English article, as the former consume only 20,000 lbs. per annum, and the latter 1,200,000 lbs. The English *shine* all their parts, and the dies are very expensive. The French [illegible]

NEW ENGLAND FARMER.

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From the Old Colony Memorial.

A DISSERTATION

On the course of tillage most suitable for soils in Plymouth County, and the rotation of crops, most conducive to the interest of the inhabitants. Read before the Plymouth County Agricultural Society, at their annual meeting at Bridgewater, October 15th, 1834, by ANTHONY COLLAMORE.

(COMMENCED IN OUR LAST.)

By numerous other experiments he ascertained that this excretion takes place chiefly during the night. As it is well known that the light of day causes the roots to absorb their juices, it is natural to suppose that during the night absorption ceases and excretion takes place. By placing one root of the plant in pure water, and another in a weak solution of acetate of lead, he found that a portion of lead had been absorbed and deposited by the branch which dipped in the pure water, thereby proving that plants employ the excretory powers of their roots to get rid of hurtful substances which they may have imbibed. Similar trials were made with lime water, and a weak solution of marine salt, with a like result.

There can be no doubt, then, that plants have the power of rejecting by their roots, soluble salts, which are injurious to vegetation. An interesting detail of an experiment on one particular family of plants will here be given.

"*Leguminous Plants.*—The only plants which he tried of this family, were peas and beans. They live and grow well in pure water. After some time, the liquid being examined, has no sensible taste, its smell is faintly herbaceous. It is quite clear, and almost colorless in kidney beans, (haricots) more yellow in peas and common beans, (fabas). The fluid, when examined by chemical tests, evaporation, &c., is found to contain a matter very analogous to gum, and a little carbonate of lime. It was found that when the water in which these plants had lived was pretty well charged with this excrementitious matter, fresh plants of the same species soon withered in it and did not live well. To ascertain whether this was for want of carbonic acid in the fluid, (which plants derive from the earth as well as from the air,) or from the presence of the excreted matter, which they repudiated, the author put into the fluids some plants of another family, and especially wheat. This lived well, the yellow color of the fluid became less intense, the residue was less considerable, and it was evident that the new plant absorbed a portion of the matter discharged by the first. It was a kind of rotation experiment performed in a bottle, and the result tends to confirm the theory of De Candolle. The author would infer that wheat may follow with great advantage a crop of beans. It is not impossible that by experiments of this kind, results may be obtained of practical importance to agriculture. The inferences which the author deduces from his experiments, (acknowledging, however, that more extended trials on a greater number of families and individuals are desirable,) are 1st, that the greater number of vegetables exude by their roots substances unfit for their vegetation. 2d, that the nature of these substances varies according to the families of the plants which produce them. 3d, that some being acid and resinous, may be injurious, and others being mild and gummy, may assist in the nourishment of other plants. 4th, that these facts tend to confirm the theory of M. De Candolle."

On this theory may be explained the ameliorating effects of the locust tree on sandy and barren soils; as the locust trees grow and extend their roots, the land becomes covered with a thick growth of grass, showing by its verdure that the roots fertilize the soil. Also why some plants are said to be poisonous to the soil; the excretion from the roots being injurious to the growth of the same plant or the same family of plants, and perhaps to some others, while it may prove salutary to the growth of some other tribes.

We now come to the principles which should govern the succession of crops.

1. Two exhausting crops of the same or different grains should not succeed each other on the same soil; and hence it has been recommended as a general rule to raise alternate grain crops and green crops, which is called alternate husbandry. Others recommend that tap and fibrous rooted plants should be raised alternately. Tap roots descend into the ground in a perpendicular direction as the parsnip, red clover, &c. and are supposed to derive most of their nourishment from a considerable depth below the surface; while the fibrous rooted plants as all grains, being composed of numerous thready or fibrous parts, are nourished chiefly near the surface of the soil. But whatever may be the true explanation, it is observed by Rozier, "that every tap rooted plant succeeds very well after a crop of plants with fibrous roots, and thus alternately;" and "it is now recognized in the writings and practice of all judicious cultivators, as a rule not to be departed from, that culmiferous crops ripening their seeds should not be repeated without the intervention of pulse, roots, herbage, or fallow."

2. The same kind of crop should not be repeated at too short intervals. If the theory stated above be well founded, the reason of this will be obvious, and experience proves the advantages of introducing different species in every course of cropping. Where land has been pastured a number of years, there may not be so much necessity for adhering strictly to this rule; but it is found by experience, that wheat and other grains degenerate, when cultivated on the same land every second year for a long period. It is said green crops, beans, peas, potatoes, turnips, and especially clover, become all of them much less productive, when they come into the land every second, third or fourth year. But what the interval ought to be, has not yet been determined, and probably cannot be until further discoveries are made in the philosophy of vegetation. It is also found advantageous to change the variety as well as the species; and even the seed of the same variety; thus it has been found beneficial to obtain the seed of Indian corn, in some cases, from a colder climate, while potatoes and oats are said to flourish best if the seed be brought from a warmer latitude. Also wheat, oats, &c. which are grown on a clayey soil, are more productive when the soil is changed and they are sown on a sandy soil.

Crops should also be so arranged, that the labors of cultivation should proceed in regular succession. Thus it will not answer in any case to sow all winter or spring crops, as the harvest would come on all at once; but by cultivating a variety of plants, the labor both of seed time and harvest is rendered easier, and the work is more likely to be done well and in season.

Another circumstance to be attended to is the nature and state in which the manure is, when applied to the land, in order that the first and all succeeding crops should be supported in the best and most effectual manner, by the change which the manure is always undergoing, till it is united and incorporated with the soil; and that those parts, not suitable for one kind of crop, may be converted into nourishment for the next, and so on in the same manner. As a general rule, manure in the unfermented state should be applied to the hoed crops; for when applied to the grains, it causes such a luxuriant growth that the grain is not well filled—in common language, it runs too much to straw or stalks. Marle, marsh mud, seaweed and marine manures, may be used for all crops; as well as the stimulants, ashes, lime and gypsum. The two last are, however, said to be most beneficial when applied to those crops in which lime is found to be a constituent part of the plant, and therefore essential to its growth, as wheat, clover, &c.

Crops should also be suited to the soil, climate, and demand. Thus the course of crops adapted to the low, moist, and clayey soils, is not the most profitable to cultivate on dry sandy soils and vice versa. Also, the course of tillage proper for the climate of England, and the rotations pursued there, cannot be introduced with advantage in this country. In the former, the mildness of the climate permits the farmer to feed off his turnip crops on the ground, by which the soil is much enriched; while here, the expense of gathering, securing, and feeding out such crops, forms the greatest objection to their cultivation.—In Great Britain they cannot cultivate our maize or Indian corn, and have no other crop which yields so rich returns in food for men and animals, and leaves the soil so free from weeds, and so favorable to be succeeded by a crop of grain. That the farmer should cultivate those crops suited to his wants and the state of the market is too evident to need illustration.

Having explained the general principles necessary to be taken into view in raising crops, we come now to consider more particularly "the course of tillage most suitable for soils in Plymouth County, and the rotation of crops most conducive to the interest of the inhabitants." On the present occasion, we shall arrange the kinds of soils, and the crops most suitable for each, under three divisions.

1st. The low, moist, clayey and swampy soils, which are most suitable for grass.

2d. Those of the rich, dark, loamy kinds, equally suitable to produce grain or grass.

3d. Light, sandy soils, which are easy of cultivation, and produce most naturally grain; but which ought to be subjected to a course of alternate mowing, or pasturage and tillage, or what is termed *convertible husbandry.*—This kind of soil is most abundant in this county.

1st. Under the first division may be ranked the

low, swampy soils, which naturally produce the sour and fresh grasses, and the fresh meadows, which, by draining and cultivation are made to produce large crops of the cultivated grasses. These should always be kept in grass;—and dressed often with compost manure suited to the soil, and when they cease to produce a good crop of grass, the sward should be turned over by the plough, in the month of August, rolled with a heavy roller, liberally covered with compost manure, harrowed lengthwise of the furrow, seeded with grass seed and rolled again. In this way these soils may be kept in a profitable course of cultivation without tillage crops. These soils may produce, in a dry and favorable season, large crops of corn and potatoes, but in a wet season the labor would not only be lost, but the crop also.

2d. Under the second division may be ranked the dark rich loams, which being equally favorable for grain as for grass, have in many instances been exhausted by continued grain crops. Taking into consideration the price of labor, and the expense of raising grain crops in this county, and the price English hay usually commands, these soils are more profitably kept in grass. But as it may be necessary to seed the land anew as the cultivated grasses run out, and to enrich it by turning in and mixing with the soil the vegetable substances collected and growing on the surface, the practice of recruiting lands adopted by Mr. Elias Phinney, of Lexington, and Mr. William Clark, Jr. of Northampton, is recommended to the farmers of this county, as combining economy in labor with profitable results. Their methods and the result of their experiments, will be concisely related:—"Mr. Phinney's experiment was made on a field of two acres, which had lain three years to grass, and the crop of hay so light as to be worth not more than the expense of making. Having ascertained, by weighing the grass and roots, from a single square foot, that an acre would give over twelve tons and a quarter of vegetable substances to the acre, his object was to turn this to good account, convinced that a great part of it was exposed to useless waste by the usual manner of ploughing, cross ploughing, and harrowing.—The sward was turned over by the plough as smoothly as possible, the outside furrow slices cut into suitable pieces, and carted and placed in the centre of the ploughland;—the land is then rolled hard with a loaded roller, and harrowed lengthwise, the furrows so lightly as not to disturb the sod. After carting and spreading on twenty loads of compost manure to the acre, it was harrowed again, and corn planted in drills upon the furrow, at the usual distance and parallel with the furrows. At hoeing time the surface was stirred by running a light plough between the rows, but not so deep at any time as to disturb the sod; and the practice of hilling up the corn is to be carefully avoided. As soon as the corn was harvested, the stubble was loosened up by running a light horse plough lengthwise through the rows, the surface smoothed with a bush harrow, and one bushel of rye to the acre, with a sufficient quantity of herdsgrass seed and red top, was then sowed, and the ground again harrowed and rolled. The corn crop yielded by estimation 70 bushels to the acre, the rye on the two acres measured 69 1-2 bushels, and over five tons of straw, and the hay mowed the next year was judged to be two and a half tons to the acre. Thus with one ploughing, and the aid of twenty cartloads of compost manure to the acre, he obtained two crops of grain, and stocked the land down to grass."

Mr. Clark's method is similar.—"On one acre he planted potatoes instead of corn, and after harvesting the potatoes and removing the tops and weeds, he lightly ploughed the land, and sowed herdsgrass and clover, and harrowed and rolled, without sowing any grain. The grass seed came up well and grew finely; but the clover was much winter-killed by the ensuing winter; the herdsgrass and remaining clover gave two crops of one ton each, and large crops the following year. So that with one ploughing and a light dressing of manure, he had a fair crop of potatoes, and grass, making by estimation eight tons of hay from one acre of ground in four years. His next experiment was commenced in 1832, on a piece of about 8 acres, in the same field with the other. The soil was lighter and more sandy, and had formerly been reduced by excessive workings, but latterly it had recruited by neglect giving only about half a ton of hay per acre.—This piece was turned over and managed in the method before stated; the corn planted in rows three feet apart each way, and stirred between the rows by the harrow and hoe.* In order to get in the clover early enough to have it stand the winter, before it was harrowed for the third time, four quarts each of herdsgrass and southern, or June clover, with eight quarts of red-top seed were mingled and sown on an acre. The grass seed came up and grew well, and by the time the corn was harvested, had covered the ground almost entirely. In the spring of 1833, after the ground had become dry, it was rolled for the purpose of crushing the corn stubs, and levelling for the scythe. The clover came out finely, and with the herdsgrass and red-top, made a large growth of each nearly equal quantities.—The first crop gave a product by estimation of two tons to the acre, of the best quality of hay, and the second cutting, or rowen, gave an average as estimated, of one ton to the acre. A few tons of the first crop were sold for thirteen dollars, and the second at ten dollars per ton, giving, if the estimate be correct, thirty-six dollars per acre, as the proceeds of one year's crop. The highest price the land has ever been sold for, was thirty dollars per acre, and before these experiments were commenced, it was reputed so poor, that no one could be found willing to cultivate it on shares, with the privilege of managing it in his own way." We have been thus particular in describing their methods and the results, because if only one half such crops can be raised in this county by similar management, it would be worth the attention of every farmer. By this method the land would be seeded anew with little expense of labor, before it was exhausted by continual cropping, and kept constantly covered with herbage, and thereby protected from the wasting influences of the sun, wind, and rain.

Another course recommended and practised by the celebrated Earl Stimson, of Galway, N. Y. has been often quoted as showing the wonderful effects of good husbandry. This practice, by which his crops have been more than quadrupled, is to turn over the sod in the fall or spring, spread eight or ten tons of barn yard manure on an acre, and then to plant with corn; and to follow the corn with barley and grass seeds, putting three pounds of clover and four of timothy seed on an acre; then let it lay two years to grass: then to go over the same rotation of crops, and his third rotation was first wheat, second corn, third barley to seed down with, applying about the same quantity of manure every time he turned over the sod.—In this way, in the course of twenty years, he got some of his fields to yield from 80 to 100 bushels of corn, 35 to 40 bushels of wheat, 50 to 60 of barley, and from two and a half to three and a half tons of hay per acre, and with less labor except in harvesting, than when he raised only about one third or one quarter as much.

[Remainder necessarily deferred to next No.]

* Stirring the ground between the rows of corn, by the plough and harrow, for the purpose of level cultivation, as recommended by Messrs. Phinney and Clark, is much more effectually done by the *Cultivator*, which has lately been introduced into some parts of this county, which is so constructed as to raise and pulverize the ground, leave it level, and in fine tilth, and at the same time destroy the weeds.

From the Southern Agriculturist.

ON FATTENING CALVES AND LAMBS.

The manner of procuring Lamb and Veal of a very fat and superior quality, as practised in England, and partially by graziers for the Philadelphia market, does not seem to be noticed in works on agriculture, in a manner worthy of the subject. With a view of impressing the importance of it upon the minds of our planters and farmers, both in reference to the profit to be derived to themselves from it, as well as the improvement of our market, which ought to be a consideration with every public spirited farmer, we shall give such details furnished to us in a conversation with a gentleman of some experience, and apparently well acquainted with the whole *rationale*, as will place the subject within the reach of every one.

All animals, in health, being high fed, and debarred from exercise, become fat—to this, in the human species, there are many exceptions; but these exceptions arise from the fact, that man as an intellectual being, is operated upon by the influence of his mind, and when that becomes disturbed by the cares of life, his physical faculties, particularly those of his digestion, become impaired, and however high he may feed, and lazy his habits may be, food will appear to do nothing more than to sustain life, without increasing his bulk. With other animals such is not the case; their wants, limited to few, nature has bestowed upon them, in a few gifts, the ample means of supplying, and hence, there are no circumstances but injury, ill health, or mismanagement, that can prevent them from becoming fat when properly and highly fed, and suffered to remain in indolence.

From the mildness of our winters, and spare labor upon our plantations, there is no portion of this country that affords greater facilities for the fattening of calves and lambs for our market than Carolina, and yet that market bears ample testimony of the gross and palpable negligence of those whose interests ought to excite them to exertion. Any one in the habit of buying his provisions, must remark the general inferiority of the veal and lamb brought to the Charleston market; we seldom see a piece of either above mediocrity, and that considered so rare, that an enormous price is demanded, and frequently obtained for it. This would not be the case, were our planters and farmers to turn their attention to this subject, which by improving the quality, would increase the consumption, and consequently their profit, by a ready market for this portion of their stock.

The method pursued in other countries, and

which can be so easily obtained in ours, is this:—the calves, shortly after they are dropt, and when they have attained sufficient strength to run and skip about, are shut up in a very dry and clean pen, about nine or ten feet square, being of a size sufficient to contain six or nine calves. A small manger, sufficiently low to enable them to reach the food placed in it, must be fixed in the centre of the pen; in this manger their food, consisting of ground Indian corn, (not sifted,) must be daily put, not more than they can consume; a small bundle of fine hay tied up, and a lump of chalk should be placed within their reach, the former for them to nibble at, the latter for them to lick. This occasions an increase of appetite in them for their mother's milk, and contributes vastly to the fattening of them; the confinement prevents them from interrupting the increase of fat by the exercise they would take in their playful gambols if let loose. The chalk also has a tendency to correct the acidity in their stomach, which frequently produces a looseness in their bowels very embarrassing to the process. The cows are kept in stalls separately, but not wholly confined, the calves are led to them every morning and evening, and having sucked their fill are replaced in their pens. The calves are thus taught to suck any of the cows; this, however, is not necessary when the cows are regularly fed, unless it is desired to have a calf of extraordinary size, by permitting it to suck longer than usual. The higher the cows are fed the better, therefore good hay, pumpkins, and steamed potatoes, should be furnished them with an unsparing hand; the nourishment of the potatoes is much improved by mixing them with hay tea; and where it can be procured flaxseed jelly; this being a scarce article in this section of the country, may, perhaps, be dispensed with, without any visible difference. In thus improving the quality and value of veal, the old stock becomes of importance, for the process in relation to the calves being effected in the course of from six to eight weeks, the butter which the cows afterwards yield, is of a beautiful yellow color, firm texture, and remarkably rich, this is the natural consequence of the feeding of the cows during the time of the fattening of the calves.

Those who pursue the process we have above detailed, in order to make the veal white, in clear weather, bleed the calves in the neck every third day, until their eyes indicate an approach to faintness; this must be done in the middle of the day. This animal appears to be peculiarly subject to plethora, therefore it should be moderately fed at first, and some blood taken from them, whenever there appears in them a loss of appetite.

In fattening lambs, the ewes require considerable attention; they should be fed upon a rye-patch or turnip bed, or food of similar character. The lambs, as fast as they are born and run alone, must be shut up in a dark stall, the size of which must correspond with the number of lambs to be attended to; a trough sufficiently low for them to eat from, must be placed in some convenient place within the stall, which must be supplied daily with Indian corn-meal and bran; within their reach must be hung up a small wisp of fine hay. Adjoining this stall there must be a larger apartment, into which the ewes are to be turned two or three times a day to suckle the lambs, and must be permitted to remain with them all night. Early in the morning, and before the ewes are turned out to pasture, the lambs must be put in their dark stall, in order to debar them from exercise; and having no other amusement but that of the glutton, will nibble so much of the hay, and eat so much of the Indian corn-meal, as to make them excessively thirsty, by the time they are to be suckled by the ewes, which will make them grow extraordinary large and fat in a short time.

There is considerable advantage derived from this mode of treatment, in the lambs indiscriminately sucking the ewes, without reference particularly to their own dams; because, when the lambs grow and gain strength, they are able to consume more milk than can be afforded by a single ewe, particularly those that have more than one lamb. Another advantage derived is, when all the lambs of a ewe are killed off, she will continue to suckle the rest as before, thus giving additional nourishment to the surviving lambs.

The process, above detailed, is so simple in its character, as to be within the reach of every one disposed to make the experiment; one that will insure both amusement and profit, and which may safely be confided (under the eye of the master,) to such negroes as could not do much in the field. Our Island planters have a favorable opportunity of stocking our markets with the finest small meats, almost without an exertion. The exhibition of our markets in the summer months, should display the finest specimens of these articles, yet there is scarcely a piece of meat of either of the above descriptions brought to market at that season, that may be compared with the inferior kinds of the North. This is a reflection upon a land like ours, abounding with luxuriant herbage and roots, and speaks a language not to be misunderstand, that there is a gross deficiency in the energy of our planters and farmers in this branch of their agricultural pursuits. S.

Charleston, Dec. 14, 1834.

TOP DRESSING WITH DRY STRAW.

It is a general practice in this neighborhood to apply the wheat-straw dry and unrotted, and often fresh from the threshing machines, as a top-dressing for the poorest parts of the clover land. It is not laid so thick as to kill the grass, and aids its growth and the fertility of the land so much, that a load of straw used in this manner, is thought much more beneficial than if it had been passed through the farm-yard, in any of the usual processes of making manure. On the farm described in the report as Wm. H. Meriwether's, (since sold to William L. Craven,) I saw a piece of land thus covered with straw, from which oats, and evidently a very good growth, had been lately reaped. Yet this growth was caused by this dry top-dressing applied after covering in the seed, and of course late, on a spot so worn as to have been otherwise very unproductive. This is certainly a very cheap mode of applying the straw, independent of its alleged (and universally admitted) superior efficacy.—*Farmer's Register.*

CHRONIC RHEUMATISM.

We are not ready to add to the number of the remedies which have been prescribed for this painful disease, without a certainty that such addition will be valuable in practice. This certainty we are convinced will attend the remedy it is the object of this article to bring before the profession. It is a mixture of equal parts of the balsam of sulphur and spirit of turpentine. Six drops of this mixture may be given morning and evening, and the dose increased two drops a day until it produces stranguary, when the dose must be diminished a little and continued until the disease is removed. We have been recently informed of the good effects of this mixture in a great number of instances, and one very remarkable case has fallen within our notice, in which the disease in its worst form, vanished before it in a few weeks, although the patient had been long using without advantage, the usual and other most powerful remedies for this troublesome and painful malady.—*Boston Medical and Surgical Journal.*

IMPORTANT DISCOVERY.

A surgeon of Gottengen has discovered a complete antidote to arsenic. It is peroxyd (or the red oxyd) of iron, twelve parts of which neutralize one of oxyd of arsenic. The following is the statement as given:

"The French papers state that a surgeon of Gottengen has just discovered that the peroxyd of iron is a powerful antidote to arsenic. Twelve parts of hydrate of peroxyd of iron are necessary to neutralize completely one part of oxyd of arsenic. It is prepared by pouring nitric acid into a very pure solution of the sulphate of iron, precipitated by ammoniac and well washed. Experiments with this antidote have been tried upon rabbits, and other animals, with complete success. One advantage of it is, that no injury can be done by too large a dose. In cases where large quantities of arsenic have been taken, it has been found useful first to encourage vomiting."—*N. Y. Star.*

From the Long Island Star.

MISCELLANEOUS.

There is this difference between happiness and wisdom—he that thinks himself the happiest man really is so; but he that thinks himself the wisest is generally the greatest fool.—*Lacon.*

A simile. Like a long standing cup of tea, life grows sweeter and sweeter toward the bottom, and seems to be nothing less than syrup of sugar at the last.—*Hood.*

Health. A precious gem, which, like Aladdin's lamp, is often bartered away for paltry gew-gaws by those unconscious of its value.

Offence and Punishment. A man who was imprisoned for marrying two wives, complained that he had been severely dealt with for an offence *which carries its own punishment along with it.*

A countryman reading a newspaper in Randolph (Tennesee), was asked why he did not subscribe for it, as it was a good paper.—"Why yes," replied the countryman, "I like it, it's right fine, but I thinks it's a *leetle* too *costive*." This is a new name for a newspaper.

Freedom. Dream not of freedom for the whole while you enslave the parts; the heart must be the centre of the system, the blood next circulates freely every where; and in vast communities you behold but a bloated and feeble giant, whose brain is imbecile, whose limbs are dead, and who pays in disease and weakness the penalty of transcending the paternal proportions of health and vigor.

The Creator. "Who but the Omnipotent could have formed the sun, could have marked out its destined course, suspended it without support in the blue vault, saying, 'this be thy station and this thy brilliant seal?' Could any power, save that of the Eternal, have created the earth, the moon, and all the planets? These undeviatingly perform their course within the orbits he has prescribed them."

TRANSPLANTING.

Transplanting is the changing of the localities of entire plants. It is effected by disengaging the roots from the soil, and placing them in new situations favorable to the growth and developement of the plant.

To accomplish this successfully, it is desirable that the roots be preserved fresh and entire.

The proper seasons for transplanting ornamental and other trees and shrubs, are the spring and fall. Generally in October and November of the latter period, and March and April of the former. It is commonly best in colder latitudes to remove the more delicate shrubs and trees in spring, but where the climate is not so severe, the autumn is preferable. In the latter case, the winter is not so likely to prove injurious to them.

Those which are natives of countries equally cold and rigorous with the one to which they are removed, may be transplanted either in the spring or autumn, indiscriminately. Such as are natives of warmer climates, and have become acclimated, by culture, to higher latitudes, may be transplanted in spring. They ought to have every advantage that the warm seasons can afford, previous to their exposure to the rigors of winter.

Plants transferred to a less favorable climate, should be removed at a period most favorable to them to support the change without injury. Delicate trees, when transplanted in spring, form new roots, that take firm hold of the earth during summer. Their roots become established in their position, so that there is far less prospect of injury from the severities of winter. It is a matter of little consequence, however, at which of these seasons the hardy kinds are removed.

Plants, when taken from the earth to be transferred, should be removed with much care. Should any injury be sustained by a loss or mutilation of of a part of the roots, the whole body of the plant, together with the roots, may be immersed in fresh water during a period of twenty or thirty hours, previous to setting it in the earth again.

The top is to be lessened in proportion to the loss the roots may have sustained. Otherwise the plant will perish from a loss of its wonted nourishment. The ordinary quantity of root being diminished, the exhaustion from *evaporation* will be greater than the *absorption* of the remaining portion of root, so that the plant will die by transpiration.

October and November, after the first frosts have arrested the progress of vegetation in woody *perennials*, is recommended as a proper season for *transplanting* them. Some are of the opinion, that the peach, plum, cherry, and most evergreens, succeed best when transplanted in spring.

Any trees, even the most delicate, may be successfully transplanted in autumn, if a little protection be afforded them by covering the root during the first and most trying winter. Where complete success is hoped, it is best to shift their locality in the fall, if possible.

The protection of most trees, shrubs and woody plants, may consist in spreading a few inches of litter from the stable around the trunk and over the roots.

Moss from the meadow and evergreen boughs are highly recommended for the protection of delicate plants. They are not liable to undergo decomposition during the winter, and thereby injure and destroy what they were designed to protect.

Delicate plants are sometimes supposed to be destroyed by too much protection after being transplanted, when, in fact, they perish for want of it, being killed by the alternate freezing and thawing of the earth at its surface. This difficulty might have been easily obviated by covering them with evergreen boughs or meadow moss.

When trees or shrubs are transplanted in autumn, the earth becomes consolidated at their roots, so that the radical fibres soon take firm footing in the earth, and the plant is prepared to vegetate with the earliest advances of spring.

The excavations in the earth for the reception of the roots of trees and shrubs should bear some proportion to their size. They may generally be made from four to six feet in diameter, and of about eighteen or twenty inches in depth. Large trees will require a larger opening than this, and small ones not so large.

The yellow or subsoil where they are to be located may be thrown out, and replaced at bottom with a fine mould, intermixed with a portion of good manure.

Trees transplanted should stand two or three inches deeper in the earth than they stood previous to their removal. In no case should the extra depth exceed this.

The radical fibres are to be spread horizontally in their natural position, and the soil intimately blended with them and compactly pressed about the trunk and over the roots.

No manure should be permitted to come in immediate contact with the roots, though it should be plentifully placed about them on all sides.—Should it touch them, they would be likely to sustain injury and rot.

The ground before being trodden very hard about the roots, is to be plentifully moistened by pouring water about the plant.

In transplanting evergreens, it is generally recommended previous to treading the earth about their roots, to pour several gallons of water about the trunk, and after filling in with earth, to finish by treading it as hard as possible for the space of half an hour or more. This would be a good rule to follow in regard to all trees of whatever kind.

June has been considered by many as the best month for transplanting *annuals* that are cultivated as FLORISTS' FLOWERS, and September the most suitable for transplanting *biennials*.

In transplanting plants of every description, it is desirable that as much earth as possible be removed with the roots. If this be done, there will be less danger of their suffering by the change of situation.

Though moist, cloudy weather is generally best for transplanting, it should not be done when the ground is very wet. The earth should be only moderately moist, otherwise it will be clammy and heavy.

The operation of transplanting is most successfully performed in cloudy days, and a little before evening previous to a shower. The reasons for this are obvious. If it be done when the earth is dry and in the middle of the day, plants require watering and shading for a considerable time afterwards.

If the root be small, or injured, or destitute of earth when taken up, it will require that the earth which is placed about it be made finer, and pressed more firmly, and that the plant be more plentifully watered. It will also require to be longer shaded.

Plants, transferred to pots and boxes, after having the soil pressed firmly about them on all sides, should also be plentifully watered and for some time shaded. Care is to be taken that the shell be placed over the aperture at the bottom of the vessel, otherwise the plant will perish through a superabundance of moisture. Saturation of the earth without an outlet at the bottom, will rot the root and destroy the plant.—*Florist's Manual.*

From the Northampton Courier.

HON. SAMUEL LATHROP'S ADDRESS

—BEFORE the Hampshire, Hampden and Franklin Agricultural Society last autumn, is excellent for its practical details and good common sense. We have the manuscript and are permitted to publish the whole. We shall print it entire, with the omission of some paragraphs adapted to the anniversary occasion. He says—

The science of Agriculture, taken in all its branches and departments, as usually practised in New England, is one of the most comprehensive and multifarious of all the departments of industry. Almost every farmer will find within the range of his superintendence, a great variety of soil—the wet and the dry—the cold and the warm—the fertile and the barren—the light and the heavy—the clayey and the sandy. Each of these varieties, in order to the development of its latent energies at the least expense, with the least exhaustion, and the most for the benefit of the cultivator, requires a great diversity of management in its preparation, in its cultivation, in the kind of manure which may be applied, with the greatest prospect of an adequate return, and in the nature of the crop best adapted to the soil.

We have also a great variety of crops to cultivate—different kinds of grain, grasses, fruits and vegetables. Now all these require different kinds of management in order to their successful culture; and they are, each of them, better adapted to some particular kind of soil, than to others. It is not every soil, with the most skilful culture, that will reward the labor of the husbandman with a good crop of wheat or of corn. Some soils will produce a liberal crop of grass, others will not; and among the cultivated grasses, some are peculiarly adapted to a particular kind of soil, where others will entirely fail.

The application of the various kinds of manure requires the exercise of a sound discretion, instructed by experience and observation. These various kinds are particularly adapted to their appropriate soils. While they will all produce a salutary and beneficial effect when properly applied, they will fail, or nearly so, when misapplied. Some kinds of manure will admit of a more general application than others, but none of them will admit of an indiscriminate application, but at the hazard of an almost total loss.

The rearing and the management of the different species of animals connected with our agricultural concerns, is another branch of industry, which requires, in order to its successful and economical pursuit, a variety of knowledge and skill, which can be learned only by a long course of observation and personal experience.

Besides, the business of the farmer does not, like that of the operatives in most of our mechanical and manufacturing establishments, admit of divisions and subdivisions, so that one branch of business may be assigned to one set of hands, and another to others. But the various departments of calculation, direction and execution press on, in succession, with respect to the particular objects

of the season, and every object, in its turn, claims the whole energies of the operatives. We cannot confine one set of hands to ploughing and sowing throughout the year, and another to reaping and gathering into our barns. Every branch of business has its appropriate season. It must *then* be done, or not at all. And much, very much of the pleasure and comfort, as well as the success attending the farmer's pursuits, depend on his being prepared to occupy each and every season of the year with its peculiarly appropriate business—upon his being ready, at all times, to drive his work, and not to suffer his own work to drive him. The man, who suffers one department to fall behind its season, and thus to encroach upon another, is in danger of finding every thing jostled out of place. He will be hurried and fretted in all his labors, and will inevitably meet with loss and disappointment. [*To be continued.*

EXPERIMENTS PROPOSED.

The following hints upon experiments in agriculture have been just received by the committee [of the Saffron Walden Agricultural Society] and printed, in the hope that as it is quite unnecessary, in order to arrive at a practically useful result, that any experiment should be tried upon a large scale, some of the members of the society may turn their attention to the subjects.

The celebrated De Candolle, in his Vegetable Physiology, has pointed out several ways in which persons who are engaged in various scientific or economic persuits may assist in perfecting the general theory of vegetation. To each class he proposes a separate series of experiments to be undertaken by them; and, among other notices, he lays down a few rules by which an *agricultural* experimenter should direct his researches. We would more particularly refer to the following:—

1. That a set of *comparative* experiments should be instituted, in all cases where any positive result may be decided. For instance, if we wish to know the effect which any particular treatment of the soil will produce upon a certain crop, then we should at the same time ascertain what is the effect of the soil under ordinary circumstances upon a crop of the same kind. We should not be satisfied with the results of a single experiment, but should repeat it on different soils and in different situations.

2. No remarks that are made during the progress of an experiment should be trusted to the memory, but should always be carefully and scrupulously recorded in writing.

3. The experimenter should be careful to state his facts in such scientific or technical terms as may generally be understood, or, if he uses merely local and popular language, he should so explain himself as to be clearly intelligible.

Had attention been paid in these rules, the results of many important experiments would have been available to science which are now no better than lost labor.

De Candolle has particularly alluded to the following experiments, among others, which may be proposed to agriculturists as likely to afford interesting results:—

1. To ascertain whether blue vitriol (sulphate of copper) is serviceable in preventing the rust, smut, and some other diseases in corn, which depend upon the attacks of minute fungi.

2. To ascertain the precise effects of gypsum or plaster of Paris (sulphate of lime) in agriculture.

(*a*) Whether it be equally efficacious, calcined or unburnt, in promoting the growth of green forage, as tares, peas, &c. [*Legumenosæ.*]

(*b*) Whether it be useful as a manure for any other tribes of plants.

(*c*) Whether its use hardens the seeds of the Legumenosæ so as to render them difficult to be cooked.

3. To determine, by exact and varied experiments, whether different kinds of corn intermixed in the same field will yield a greater or less produce than when grown in separate fields.

4. To prove by experiments on physiological and chemical principles, (as laid down by De Candolle,) what rotation of crops may be most advantageously adopted on different soils, and what soils, by a rotation of crops, will yield all the advantages of which the alternate system is capable.—*British Farmer's Magazine.*

ARCHITECTURE.

From the Ohio Farmer.

WHITE WASH.

As the citizens of our village have, much to their credit, turned their attention to painting and white washing the outside of their buildings, we insert the following in hopes something may be drawn from it to their advantage on the score of utility and economy.

Incombustible Wash and Stucco White Wash.—The basis of both is lime, which must be first slacked with hot water, in a small tub or piggin, and covered, to keep in the steam; it then should be passed in a fluid form, through a fine sieve, to obtain the flour of the lime. It must be put on with a painter's brush—two coats are best for outside work.

First, To make a fluid for the roof, and other parts of wooden houses, to render them incombustible, and coatings for brick, tile, stone work and rough cast, to render them impervious to the water, and give them a durable and handsome appearance. The proportions in each recipe are five gallons. Slack your lime as before directed, say six quarts, into which put one quart of clean rock salt for each gallon of water to be entirely dissolved by boiling, and skimmed clean; then add to the five gallons one pound of alum, half a pound of copperas, three-fourths of a pound of potash—the last to be gradually added; four quarts of fine sand or hard wood ashes must also be added; any coloring matter may be mixed in such quantity as to give it the requisite shade. It will look better than paint, and be as lasting as slate. It must be put on hot. Old shingles must be first cleaned with a stiff broom, when this may be applied. It will stop the small leaks, prevent moss from growing, render them incombustible, and last many years.

Second, To make a brilliant Stucco White Wash for buildings, inside and out. Take clean lumps of well burnt stone lime; slack the same as before; add one fourth of a pound of whiting or burnt alum pulverized, one pound of loaf or other sugar, three pints of rice flour made into a very thin and well boiled paste, starch or jelly, and one pound clean glue, dissolved in the same manner as cabinet makers do. This may be applied cold within doors, but warm outside. It will be more brilliant than plaster-of-paris, and retain its brilliancy for many years, say from fifty to one hundred. It is superior, nothing equal. The east end of the President's house in Washington is washed with it.

CHENAM.

Our merchants are indebted to Captain Thomas Bennett, of the New-York and Liverpool packet line, for the introduction of this article into use here. Chenam (the East India name), is made by mixing slacked and pulverized lime with whale oil to the consistency of mortar. It is so tenacious that it adheres immediately wherever applied, and is entirely impervious to water, and becomes perfectly hard in it.

It is laid on ships' bottoms with trowels, sometimes under the sheathing and sometimes between the copper and sheathing; and, in some instances in both places. The copper is put on while the Chenam is soft, and adheres to it so completely that no water passes between them; and it is said that copper in vessels which have a coat of Chenam wears nearly double the usual time.

Whale oil is used here in making it, because it fully answers the purpose, and is two-thirds cheaper than vegetable oil—but vegetable oil makes much the best Chenam, becoming after a short time as hard as a stone. It is suggested that the celebrated mortar of the ancients was made of lime and vegetable oil.

I understand that some experiments will be made here on roofs and outsides of houses, with Chenam, as it is believed it will effectually resist the fogs and frosts of our climate, which the common rough casting does not.—*New Bedford Gaz.*

GUM ELASTIC.

Mr. Geo. D. Cooper, of this city (N. York) has obtained a patent for an entirely new and most valuable application of the gum elastic, viz. to prevent leaking in ships, damage to cargoes, and preserving the timbers from rot, and also sheathing for roofs of buildings.

The places to which the gum elastic sheets or cloths, saturated with gum elastic, are to be applied, are—

1st. Between the inner part of the ribs and the inner planking.

2. Between the outward part of the ribs and the outward planking.

3. Between the outward planking and the copper.

4th. Between the deck beams and deck planking.

By this application there will be a perfect unbroken sheet of gum elastic from stem to stern, and all round the vessel, which must be impervious to water.

Such an improvement is incalculably the best protection against leakage or damage than any yet discovered. For roofs of houses it is equally valuable, to make them air and water tight. We trust that the ships now on the stocks will make the experiment before planking.—*N. Y. Star.*

Glass. French mirrors are said to be beyond competition for cheapness and beauty; but the French crystal, though whiter, wants the softness and unctuosity of the English, caused by less frequent melting.

Plated Ware. The French mode of working plated ware is more simple than the English, but the latter have the advantage in their milled copper, costing less. The French need not fear the English article, as the former consume only 20,000 lbs. per annum, and the latter 1,200,000 lbs. The English *stamp* all their pieces, and the dies are very expensive. The French chiefly turn.

NEW ENGLAND FARMER.

BOSTON, WEDNESDAY EVENING, JAN. 28, 1835.

For the New England Farmer.

DIFFERENCE OF TEMPERATURE IN HILLS AND VALLEYS.

Mr. Fessenden—*Dear Sir,* I will give the following, in answer to the quere of Mr. Breck in a late Farmer. As warm air ascends, it follows of course that cold air will descend, and occupy the lowest places, in the absence of the sun. Mr. Breck says, it is known the higher you go the colder it is, probably so to the extent of the atmosphere; but cold must have its limits. I cannot conceive of its being colder, than in a place where all heat is absent. It is probable, that if it were not for the sun's rays, that the atmosphere would be of uniform temperature; it is known that the sun's rays pass through a transparent body, like air, without heating it but little if any; but in striking the Earth, they there create heat; and by expanding the air, at the surface of the earth, cause it to ascend; and in the absence of the sun during the night, the warmest air will be ascending, and the coldest descending: we will say that the sun shall be absent from Lancaster for a time sufficient, and that the atmosphere there shall be stationary, the coldest air would continue descending on the valley of the Nashua, and the warm ascending, until the temperature of the atmosphere from the surface of the earth, to its extremity, were equal.

With respect to the difference of cold, in the valley, and on the hill, in time of calm, and a high wind,—I will say in answer, that when the atmosphere is moving over an uneven country, with great velocity (what we call a high wind) rising over the hills and descending into the valleys, forming various eddies and currents, it would naturally intermix the higher and lower temperatures of the air, and make the cold on the hill and in the valley more uniform than it would be in a still time; therefore, if there had been a wind at Lancaster, on Sunday morning, the Thermometer on the hill and in the valley would have ranged more uniform.

Respectfully yours, &c. William Keith.

West Roxbury, Jan. 15th, 1835.

By the Editor. Mr. Breck's queries are in substance, 1st. Why it is colder during a severe frost, in a valley, than on hills adjacent?—2. If there is wind in a very cold day, will there be any difference between the temperature of the hills and valleys?

It is well known that the mean temperature of any place depends on many circumstances, too numerous to be here recapitulated, besides its distance from the equator. Sir John Sinclair in his *Code of Agriculture* observes, "It may be remarked, that land in the same parallel of latitude, other circumstances being nearly similar, is always more valuable in proportion to the comparative lowness of its situation. In the higher districts, the quality even of the herbage is less succulent and nourishing, and the reproduction slower, when in grass; while the grain is less plump, runs more to straw, is less perfectly ripened, and the harvest is also later.

"It has been estimated, that sixty yards of elevation in the land are equal to a degree of latitude; or in other words that sixty yards perpendicular higher, are in respect of climate equal to a degree more north."—*Code of Agr.* p. 25—6.

That the temperature or mean warmth of a place in the growing part of the season is greater on low land than on high land in the same latitude, appears from the fact that the spring is more backward and the harvest is much later on the heights of land between the Merrimack, Connecticut and North Rivers, than in the valleys which are pervaded by these streams. Yet, in very cold weather these high lands are the warmest. The causes of this difference have been well explained by our correspondents, but we will add a few words.

In the summer or in warm weather the source of heat is the sun. His rays pervade the atmosphere, strike the earth's surface, are reflected from the points of contact, and warm the air most which is nearest the reflector. A valley, like that of Nashua river, or the valley of the Connecticut for instance, is a concave reflector, and serves to concentrate the sun's rays and prevent their being so dissipated and diverged as to produce a comparatively small effect. If we might compare great things with small, and not be cut up by the critics for be-littling our subject, we should say the sun in summer was like a culinary fire, a valley like a thing called a tin-kitchen placed before said fire, and the air and other matters in and upon the surface of said valley like whatsoever may be placed to warm or to roast in said utensil. But a hill, or high land presents a convex surface to the sun, and causes its rays to diverge instead of being concentrated, and (to pursue our sublime comparison) is like the back of said tin apparatus, turned towards the fire.

But, in the winter time, and when the sun acts feebly, the earth, the waters and air, previously warmed, are the sources of what caloric or heat there is left. They give out warmth to particles of air with which they are in immediate contact, which particles ascend, are conducted up the sides of hills, &c. in consequence of their possessing less specific gravity. Cold air, as well as cold water, is heavier than warm air, or warm water, existing under about the same pressure of the super-incumbent air or water. Of course the particles of comparatively warm air slip from under the colder atoms above them and make their way to higher ground. Thus if you put oil in a vessel and pour water upon it the water will take the lowest part, because it is heaviest in proportion to its bulk.

With regard to the question, whether there would be any difference in a windy as well as cold day between the temperature of hills and valleys, we should suppose the difference must be very little, if at all perceptible. Thus oil and water shaken together in a bottle will, for a short time appear to be united, but a little rest will cause the water to take its place below the oil.

THERMOMETRICAL.

Range of Thermometer at the Maverick House, East Boston, in a shaded Northwesterly exposure, free from the wall. J. Wilson.

I certify that the Thermometer above mentioned was made by me and is true. Frederick Poole.
Boston, Jan. 19, 1835.

January, 1835.	7 A.M.	1 P.M.	9 P.M.	Mean.
Monday, 19th, - -	18	41	28	29
Tuesday, 20th, - -	30	49	33	37
Wednesday, 21st, -	24	36	34	31
Thursday, 22d, -	40	41	35	39
Friday, 23d, - -	36	44	33	38
Saturday, 24th, - -	29	31	27	29
Sunday, 25th, - -	21	34	42	32

Wonders of Chemistry. Aquafortis and the air which we breathe are made of the same materials. Linen, and sugar, and spirits of wine are so much alike in their chemical composition, that an old shirt can be converted into its own weight in sugar, and the sugar into spirits of wine. Water is made of two substances, one of which is the cause of almost all combustion or burning, and the other will burn with more rapidity than almost any thing in nature. The famous Peruvian bark, so much used to strengthen weak stomachs, and the poisonous principle of opium are formed of the same materials.

ITEMS OF INTELLIGENCE.

Missionaries Murdered. Rev. Samuel Munson and Henry Lyman, sent out by the American Board, were murdered on the 28th June, in Sumatra, while traveling into the interior. Their widows were at Batavia in Sept. under care of Rev. Mr. Medhurst, of the London Missionary Society, well provided for but in deep affliction.

Recipe. The bark of a willow tree burnt to ashes, mixed with strong vinegar, and applied to the parts, will remove all warts, corns, and other excrescensies on any part of the body.

Odoriferous substances offensive to Insects. It is said that the common mint strewed among grain as it is stowed away in the barn, will preserve it from being injured by vermin. Camphor, when kept among bed-clothes, will keep away bed bugs and fleas. From these circumstances, together with the fact that we do not recollect of having seen plants strongly odoriferous injured by insects, we are led to conclude that farmers might be benefitted by turning their attention to the subject.

Large Swine. Mr. John Tillow, of Frederick, Md. lately killed 4 hogs, whose respective weights were 469 1-4, 428, 426, 425 3-4, and whose average length from the nose to the root of the tail was 6 feet, and their girth 5 feet 6 inches.

Larger yet. Mr. Philip Jones, of Amesbury, has lately killed a hog, 20 months old, which weighed 636 pounds.

Benjamin Brown, Esq. of Vassalborough, Me. has offered to give $10,000 towards founding an Hospital for the Insane in Maine.

By the resignation of Judge Duval, of the Supreme Court of the United States, Judge Story takes the vacant chair as *Senior* Associate with the venerable Chief Justice Marshall.

A bill of indictment has been found by the Grand Jury of Westchester county, New-York, against the individual known as Matthias the prophet, for the alleged murder of Elijah Pierson.

We perceive among the standing committees of the Legislature of Maryland, one on the subject of applications for Divorces. It is to be regretted that there are so many unfortunate or discontented married people to make such a committee expedient.

A resolution has passed the Georgia Legislature, giving $3,000 for the education of the deaf and dumb of that State, and appropriating 10,000 for the erection of a Southern Asylum, as soon as not less than two other States shall unite in the project.

Of the members constituting the present House of the New-York Assembly, 23 are lawyers, 10 are doctors, 63 are farmers, 21 are merchants, one currier, one bookbinder, one carman, one saddler, one ship-joiner, one carpenter, and three are gentlemen of leisure.

Sweet Potatoes. The Natchez Courier says—We have received from John H. Helm, Esq. a planter of this county, a couple of twin potatoes, one measuring 18 and the other 12 inches in length, and weighing together 14 1-4 pounds—enough for 20 persons to dine upon.

Messrs. Editors,—To excite the emulation of other farmers in Windham County, I would state the fact that the Cheese, which obtained the first premium of $50 offered by the Massachusetts Agricultural Society and awarded at their late meeting in Boston, was from the excellent dairy of Messrs. B. & J. Lynde of Guilford. Farmer's Friend.—*Vermont Phoenix.*

Ohio. The Senate have voted 17 to 16, for the execution of criminals in private. A proposition for abolishing the punishment of death was rejected by a vote of 24 to 9.

The present Lord High Chancellor of Great Britain, (Lord Lyndhurst) is a native of Boston, Mass. He left Boston with his father (the late Sir John Copely) the day preceding the battle of Lexington, which circumstance saved their family property from confiscation. The land below the Hancock estate, on Beacon street, now occupied by some of the most splendid private residences in the Union, belonged to the Copely family. The widow of the late Gardiner Greene, of Boston, is sister to Lord Lyndhurst.

HORTICULTURAL REGISTER, AND GARDENER'S MAGAZINE.

Conducted by T. G. Fessenden, and J. E. Teschemacher.

No. 2 of the above work will be published Feb. 1, 1835,—and contain the following original articles:—

Salpiglossis—(with a colored plate);
A Parasite of the Honey Bee;
Further Remarks on Celery;
On the Cultivation of Florist's Flowers, and Raising New Varieties from Seed;
On the Culture of Asparagus;
On Collecting Specimens of Natural History, &c.;
American Plants;
Horticultural Notes,—upon the Morus Multicaulis, Fruit Trees and Flowers.
Floriculture near Boston,—Notice of Plants at the Conservatory of J. P. Cushing, Esq. and at Messrs. Winships;
Notice of European Publications;
Gardener's Work for February.

The very favorable reception of the first No. of the above work encourages the Publisher to fulfil his intentions; and the very moderate terms of a work intended to be so useful and interesting, encourages the belief that its circulation will be extensive throughout the different States, thereby enabling us to continue its benefits, introducing plates, &c.

We would request an inspection of the present Number.

Terms, Two Dollars in advance.

GEO. C. BARRETT.

CHOICE AGRICULTURAL SEEDS, &c.

New Italian Rye Grass, and Pacey's Perennial do.; Sainfoin, Finest Provence Luzerne, Dutch White Clover, Trefoil or Yellow Clover, New Crimson Clover, or Trifolium incarnatum; Orchard Grass, or Cocksfoot; Tall Oats Grass, Skinless Oats, Early Angus, Hopetoun, and English Potato Oats, weighing 44 lbs pr bushel, Superior Barley, Large field Burnet, Timothy or Herds Grass, Vetches, Lentiles; Taylor's Forty-fold Potato, now taking precedence of all others, Early Nonpareil, Mercer, Kidney and Pink-eye Potatoes, Potato Onion, White Italian Mulberry, Large Riga Flax, Dyers' Madder, Woad, and Weld; Extra large Fuller's Teazel, Large white field Carrot, the sweetest and most profitable for Cattle; Red, Yellow, and White Mangold Wurtzel, the two latter exceedingly sweet, and all very profitable for Cattle and Garden.

All the foregoing Seeds, and every other kind for the Farmer, or for the Kitchen and Flower Garden will be supplied at moderate prices, comprising many superior new vegetables, never before offered to the public. Among these are a number of very superior Cabbages, Lettuces, Peas, Beans, Onions, Radishes, Beets, Cucumbers, Squashes, Pumpkins, Spinach, Turnips, &c. introduced from France, Spain and Italy. The following choice new Melons can now be supplied—Malta winter, with green flesh, rich and high flavored, and keeps till February; Netted Romana, Oval Romana, French Muscade, Cohansa, Imperial, Ispahan, Cyprian, Early Cantaloup, Green fleshed Sugar, Fine Japan Cantaloup, Dark Orange, Embroidered Cantaloup, Scarlet Rock, Small Prescot, White Rock, Green Pine apple. Netted Cantaloup, and some others, comprising a luxurious addition to the dessert. All applicants will have the Seed Catalogue and other Catalogues sent them *gratis*, and orders sent direct per mail for Seeds, Fruit and Ornamental Trees, Flowering Plants, Green House Plants, Bulbous Roots, Double Dahlias, &c. will have prompt attention, and the packages forwarded precisely as designated. Chinese Mulberry, or Morus Multicaulis trees at $25 per 100, and Cuttings in proportion, Grape Vines, and Cuttings of all kinds at moderate prices and in any quantity.—*N. B.* The Grass Seeds, &c. in quantities will be supplied much below the usual rates.

WM. PRINCE & SONS.

Linnæan Garden and Nurseries near New York. 2t

GENTLEMEN'S POCKET FARRIER.

Shewing how to use your Horse on a journey and what remedies are proper for common accidents that may happen on the road. By F. Tuffnell, Veterinary Surgeon. The remedies prescribed are simple and easily obtained. For sale at the N. E. Farmer Office. Price 15 cents.

FRUIT TREES,

ORNAMENTAL TREES, PLANTS, &c.

Nursery of WILLIAM KENRICK, in Newton, Mass. 5½ *miles from Boston by the Western Avenue, and ¼ a mile from the Worcester Rail Road.*

The fruit trees include the finest kinds of Flemish Pears,—also Apples, Cherries, Peaches, Plums, Nectarines, Apricots, Almonds, Quinces, Grape Vines, Currants, Raspberries, Gooseberries, and Mulberries, including the Chinese Mulberry, or Morus Multicaulis, Strawberries, Figs, &c. selections from the very best varieties known. The Ornamental Trees and Plants alone, comprise one thousand varieties, the most beautiful kinds known; these include Horse Chesnuts, Weeping Willows, Catalpas, Mountain Ash, Ailanthus or Tree of Heaven, Scotch Larch, Silver Firs, Venetian Sumach, Altheas, Snowballs, Lilacs, Honeysuckles, &c.—Superb China and Hardy Roses, Herbaceous Flowering Plants, Pæonies, and splendid Double Dahlias.

Address to WILLIAM KENRICK, Newton, Mass.—and gentlemen will please to forward their orders early. Trees, plants, &c. when ordered, are sent to the city, without charge for transportation. They are selected and labelled with due precaution and care; and securely packed, and forwarded from Boston, by land or sea.

All orders which may left with Geo. C. Barrett, at his Seed store, 51 and 52 North Market Street, Boston, who is agent, will be in like manner, promptly attended to.—Catalogues gratis on application.

10,000 PEACH TREES. Those gentlemen who contemplate forming extensive orchards of the peach tree, near the location of our rail roads, are invited to make early application.

WANTED

To hire from three to five years within three or four miles of Boston Market a farm from ten to thirty acres of land with a good dwelling house and other out buildings. For information apply at No. 56 Faneuil Hall Market.

4t Jan. 28

FOR SALE AT THIS OFFICE.

A complete well bound, unsullied copy of Vol. 1, of the "*New England Farmer.*" Having been much call for it the owner will sell it for $5. Jan. 26 3t

TO THE PUBLIC.

It is now about forty years, since the late Dr. Samuel Lee, of Windham, Conn. (now deceased), began to furnish the public with his celebrated "LEE'S WINDHAM BILIOUS PILLS," or *Family Physic.* Through the agency of *Dr. Isaac Thompson, of New London, Conn.* these much esteemed *Bilious Pills*, or *Family Physic*, have continued ever since they were made known to the public, to give general satisfaction to those who have made use of them, *when obtained genuine;* but it is unfortunate for the public, as well as to the proprietor of this celebrated medicine, that these pills have often been counterfeited, and many families have had a *spurious* article put upon them, when they supposed they had obtained the genuine article; and it is a lamentable fact, that *some few* Druggists will purchase the spurious article, (knowing them to be such,) and sell them for the *genuine* article for the paltry gain of two or three dollars on each gross they purchase. The proprietor of this valuable medicine considers it his duty to the public to be at a very great expense in advertising very extensively in the newspapers of the different States, to guard them against being longer imposed upon by having *counterfeit* or *spurious* Lee's Pills put upon them, when they ask for the *genuine* article. In order that the community may be protected from such gross imposition, the subscriber (now proprietor of these celebrated Pills) signs his name at full length, "*Isaac Thompson,*" on a red label that is on the outside envelope that will be found around each box of the *genuine Lee's* (Windham) *Bilious Pills*, or *Family Physic.* If purchasers will only be particular to inquire for Thompson's Lee's Pills, and be careful to observe that his name at full length is signed on the red label around each box, in his own hand-writing, they will be sure of obtaining the genuine article.

The above mentioned Pills may be had of most of the respectable Druggists throughout the United States, and of the subscriber, (proprietor,) at New London, Connecticut.

j 28 ISAAC THOMPSON.

HOLLIS' CELEBRATED HORSE LINIMENT,

For Sprains, Bruises, Wind-Galls, Old strains, Stiff joints, Swelled or Cracked Heels, and for Horses that are strained in the back sinews, wrung in the withers, &c.; also for Glandular swellings of the Throat.

The ingredients which compose this preparation have been carefully selected after many years experience, and are some of the most successful remedies united, correctly proportioned and happily adapted to afford relief in all the above mentioned complaints; the proprietor feels assured that when once this article is used, it will be preferred to any other, as it is decidedly the best and certainly the most convenient article in use.

N. B. Persons afflicted with Rheumatism, Sprains, Cramp, Numbness, Stiffness or Weakness in the Joints, will find this Liniment a valuable and efficacious remedy.

Prepared and sold by THOMAS HOLLIS, Druggist and Chemist, No. 30, Union Street, Boston, Mass.

☞ The Public are requested to observe that each label is signed.

Price of large Bottles one dollar, small do. 75 cents. o29

PRICES OF COUNTRY PRODUCE

Corrected with great care, weekly.

		FROM	TO
Apples, russets,	barrel	2 50	3 00
Beans, white,	bushel	1 75	2 25
Beef, mess, (new)	barrel	10 25	10 50
Cargo, No. 1	"	8 00	8 75
prime,	"	6 75	7 00
Beeswax, (American)	pound	20	22
Butter, inspected, No. 1,	"	14	17
Cheese, new milk,	"	8	9
skimmed milk,	"	3½	6
Feathers, northern, geese,	"	40	45
southern, geese,	"	36	40
Flax, American,	pound	9	10
Flaxseed, none,	bushel	1 25	1 37
Flour, Genesee, cash.	barrel	5 62	5 75
Baltimore, Howard str.	"	5 37	5 50
Baltimore, wharf,		5 50	5 62
Alexandria,	"	5 25	5 75
Grain, Corn, northern yellow,	bushel	70	75
southern yellow,	"	65	68
white,	"	68	70
Rye, Northern,	"	83	85
Barley,	"	63	65
Oats, Northern, (prime)	"	40	45
Hay, best English,	ton	17 00	20 00
Eastern screwed,	"	13 00	15 00
Hard pressed,	"	14 00	16 00
Honey,	gallon	37	42
Hops, 1st quality (new)	pound	11	13
2d quality	"	10	11
Lard, Boston, 1st sort,	pound	9	
Southern, 1st sort,	"	7	8½
Leather, Slaughter, sole,	"	17	19
" upper,	lb.	10	12
Dry Hide, sole.	pound	15	17
" upper,	lb.	18	20
Philadelphia, sole,	pound	27	30
Baltimore, sole,	"	25	27
Lime, best sort	cask		1 00
Pork, Mass. inspec., extra clear,	barrel	17 00	18 00
Navy, Mess,	"	16 00	
Bone, middlings,	"	8	8 58
Seeds, Herd's Grass, (new)	bushel	2 25	2 50
Red Top, northern,	"	75	87
Red Clover, northern, none	pound	8	10
White Dutch Honeysuckle	"	25	31
Tallow, tried,	cwt	7 80	8 00
Wool, prime or Saxony Fleeces,	pound	60	65
American, full blood, washed	"	50	58
do. 3-4ths do.	"	45	50
do. 1-2 do.	"	38	42
do. 1-4 and common	"	32	36
Native washed,	"	38	40
Northern pulled. Pulled superfine,	"	50	55
1st Lambs,	"	40	45
2d "	"	30	38
3d "	"	23	25
1st Spinning,	"	35	40

Southern pulled wool is generally 5 cts. less per lb.

PROVISION MARKET.

RETAIL PRICES.

Hams, northern,	pound	11	12
southern,	"	8	9
Pork, whole hogs,	"	6	7
Poultry,	"	10	12
Butter, (tub)	"	14	17
lump,	"	18	20
Eggs,	dozen	20	25
Potatoes,	bushel	37	50
Cider, (new,)	barrel	2 75	3 00

BRIGHTON MARKET.—Monday, Jan. 26, 1835.

Reported for the Daily Advertiser and Patriot.

At market 492 beef cattle and 475 sheep.

Prices. *Beef Cattle.* No particular variation in prices for several weeks for corresponding qualities. We noticed four from "the River," better than we have seen this season, which were taken for considerably more than our highest quotations; also several pairs very fine, something over; we quote prime at 23s 6d and 30s 9d; good at 25s 6d a 27s; thin 21 a 24s.

Sheep—We noticed lots taken at 3, 3 50, 4 50, 5 and $6, some of which were very fine.

Swine—None at market.

GREEN HOUSE GLASS.

Of *superior thickness* with every quality of *Window Glass* for sale by LORING & KUPFER, No. 10 Merchants Row

Jan. 26 2mis

BREMEN GEESE.

For sale, a few pairs of fine Bremen Geese by

GEORGE C. BARRETT.

MISCELLANY.

From Brainard's Poems.

THE project for colonizing in Africa the "free people of color," was the subject of these lines.

"Magna componere parvis."

ALL sights are fair to the recover'd blind—
All sounds are music to the deaf restor'd—
The lame, made whole, leaps like the sportive hind;
And the sad bow'd down sinner, with his load
Of shame and sorrow, when he cuts the cord,
And drops the pack it bound, is free again
In the light yoke and burden of his Lord.
Thus, with the birthright of his fellow man,
Sees, hears and feels at once the righted African.

'Tis somewhat like the burst from death to life;
From the grave's cerements to the robes of Heaven;
From sin's dominion, and from passion's strife,
To the pure freedom of a soul forgiven!
When all the bonds of death and hell are riven,
And mortals put on immortality;
When fear, and care, and grief away are driven,
And Mercy's hand has turned the golden key,
And Mercy's voice has said, "Rejoice—thy soul is free!"

MR. ADAMS' ORATION

—Upon the life and character of Gen. Lafayette, is spoken of by those who heard it as one of the first productions of the day. For the able manner in which he discharged the duty assigned to him, Mr. Adams has received the thanks of both houses of Congress. The House of Representatives ordered 50,000 copies to be printed at its own expense, for gratuitous distribution, and the Senate 10,000 copies. These just compliments to Mr. Adams must be highly gratifying to him, as well as to his old friends, who have in this instance an opportunity of seeing that his talents and character still command the respect due to them, in spite of all the force of that party machinery and political depravity which controls public sentiment and drives such men from the high posts of honor to which they are entitled.—*Lancaster Journal.*

LEECH BITES.

Difficulties occasionally arise, in practice, in consequence of an unexpected and profuse hemorrhage after the leech lets go its hold. There have been several instances, in the United States, of the death of infants from this cause. It becomes important, therefore, to keep in recollection the best methods of treatment in such cases. Plaster-of-paris paste has lately been thought the most successful; but a writer in England, who appears to have had considerable experience, gives the following directions:

"Cut from rather fine linen as many pieces as you may require, of half an inch square each, and place one over each bleeding orifice. When it is perfectly wetted with the blood, it should be pressed to the skin, and at the same time a dossil of lint, or other very absorbing substance, brought to a point, must be applied to the centre of the linen. The fresh blood being thus taken from the edges, they are allowed to dry and become firm."—*Boston Med. & Sur. Journal.*

Watch Oil. Mr. Samuel Smith, watch-maker, of this city, is already well known as a manufacturer of watch oil, and we have seen a bottle of it in a fluid state, while under exposure in the late severe weather. Hence it is believed to be of a superior quality for that use.—*Brooklyn, L. I. paper.*

ITEMS.

It was said, with truth, by Charles the Twelfth of Sweden, that he who was ignorant of the arithmetical art was but *half a man.* With how much greater force may a similar expression be applied to *him* who carries to his grave the neglected and unprofitable seeds of faculties, which it depended on himself, to have reared to maturity, and of which the fruits bring accession to human happiness—more precious than all the gratifications which power or wealth can command.—*Dugald Stewart.*

We have the following account of a genuine patriot from a foreign paper:—

General Laurent was a baker at Languedoc—he took up arms during the French revolution, and rose by his bravery to the rank of general: but when he found Bonaparte had destroyed the republic, he burnt his uniform and took to his trade again, in which he continued to his death.

Fame. What a difference too between the aspiration after immortality and the pursuit of celebrity! The noise of distant and future fame is like the sound of the far off sea, and the mingled roll of its multitudinous waves which as it swells on the ear elevates the soul with a sublime emotion; but present and loud applause flung continually in one's face, is like the noisy dash of the surf upon the rock,—and it requires the firmness of the rock to bear it.—*Mrs. Jameson.*

Keep Cool. A man of sensibility is always either in the attic of ecstacies, or the cellar of sorrow; either jumping with joy, or groaning with grief. But pleasure and pain are like a cucumber—the extremes are good for nothing.

A gentleman attempting to carve a fowl, finding considerable difficulty in separating its joints, exclaimed against the *cheat* who sold him an old hen for a chicken. "My dear," said his wife, "don't talk so about the aged and respectable Mr. B——, he planted the first hill of corn that was planted in C——." "I know it," said the husband, "and I should think that *this hen* scratched it up."

Incendiary Rat. While the owner of a soap factory in the city of New York on Monday night was washing his hands, he observed a lighted candle placed by one of the workmen, carried off by a rat, who dived into a hole. On darkening the premises the light was discovered through the crevice of a board, and on raising the floor the candle was found burning near some shavings, and in a few minutes more the whole building would have been on fire. Great caution should be used not to leave candles lighted where rats can carry them off.

Squinting—Simple Remedy. I have not deemed it necessary to notice squinting among diseases of the eye, the cure of it being of a purely mechanical nature. The contrivance of this kind with which I am acquainted, consists of spectacle frames fitted with convex horn, having a small aperture only large enough to admit light to the centre of the pupil, by which means the squinter, if he wishes to see at all, is obliged to accustom himself to look straight forward.

Sand. No manure is so good as sand to loosen and soften a clay soil. A clay soil has more the food of plants in it than any other soil, and wants only to have its cohesion sufficiently broken to give a free passage to the roots of vegetables. A layer of two and a half inches thick will not be too much for land in tillage, if it be a stiff clay. The benefit of sanding does not appear so much the first year, as in a year or two afterwards, for the oftener the land is tilled the more thoroughly is the sand mixed with the clay. But sand, laid on clay land, in grass, will produce great effect.—*Hartford Times.*

NEW ENGLAND SEED STORE.

At the *Agricultural and Horticultural Warehouse* connected with the New-England Farmer the subscriber continues the Seed Establishment, and now offers to dealers, Gardeners, and the public generally an unrivalled collection of

GARDEN, GRASS, AND FLOWER SEEDS,

comprising unusual fine varieties and of undoubted quality and vitality—being raised under the particular direction and expressly for the establishment.

Garden Seeds in boxes assorted for dealers from 10 to 100 dollars each.—Also in pounds, halves and quarters at very moderate prices.

Boxes of Seeds containing a good assortment for private gardens at $3 each.

300 to 400 choice varieties of FLOWER SEEDS in 6 cent papers—20 papers for $1,00.

Grass Seeds at the lowest market prices at Wholesale and Retail.

Fruit and Ornamental TREES, *Grape Vines, Plants and Roots* supplied at one day's notice.

Just published a Catalogue of 80 pages which will be sent *gratis* to customers. GEO. C. BARRETT.

Jan. 21.

A GARDENER.

An experienced Gardener well acquainted with the duties of his business in all its departments wishes a situation. Can produce good recommendations. Address J. B. at this office.

Jan. 21.

COW AND CALF.

FOR Sale an excellent Cow and Calf.—Price $50. Apply to G. C. BARRETT. Jan. 21.

SILKS AT REDUCED PRICES.

ELIAB STONE BREWER intending to make a new arrangement in his business will sell his stock of Silk Goods at very reduced prices, viz:

20 Pieces Blk. Gros de Naples (slightly spotted) at 25 cts. per yard—15 do. perfect, 2s. do—25 do. Superior Satins Levantines, 3s6. do.—10 do. do. 3s.—6 do. Rich Striped do. 3s.9.—40 do. Rich and Superior Col'd Poult de Soies, 3s.—30 do. do. (spotted) 2s.6.—25 do. Heavy Blk. Sinchaws from 2s.6 to 3s.6. 25 do. do. Sarsnets, from 2s. to 2s.6.—100 Dress Patterns Fig. Black Canton Crapes at 6s. per pattern—50 do. do. to match, 7s.6—50 do. do. Brown, 7s.6—50 pieces Black Canton Crapes at 1s. per yard—20 do Heavy Blk Turk Satins (4-4 in width) 6s. 5 do. do. Italian Lustrings 5s.—10 do. Common do. 3s.—10 do. Fig'd and Plaid Sarsnets, 2s.6—20 do. Grecian Shallys of superior fabrick and figures 3s.9—a few pieces Foulards at 5s.

Also, Blk. Brown, Green, Lt. Blue, Pink and yellow Satins.

No. 414 Washington-street, Dec. 27th, 1834.

NEW WORK.

JUST received from the Publisher a new work entitled CALCAREOUS MANURES, treating upon the different capacities of soils for improvement &c. by E. Ruffin, Esq. Editor of the Farmer's Register. GEO. C. BARRETT,
New-England Farmer Office.

THE NEW ENGLAND FARMER

Is published every Wednesday Evening, at $3 per annum, payable at the end of the year—but those who pay within sixty days from the time of subscribing, are entitled to a deduction of fifty cents.

☞ No paper will be sent to a distance without payment being made in advance.

AGENTS.

New York—G. C. THORBURN, 67 Liberty-street.
Albany—WM. THORBURN, 347 Market-street.
Philadelphia—D. & C. LANDRETH, 85 Chesnut-street.
Baltimore—I. I. HITCHCOCK, Publisher of American Farmer
Cincinnati—S. C. PARKHURST, 23 Lower Market-street.
Flushing, N. Y.—WM. PRINCE & SONS, Prop. Lin. Bot. Gar
Middlebury, Vt.—WIGHT CHAPMAN, Merchant.
Hartford—GOODWIN & Co. Booksellers.
Newburyport—EBENEZER STEDMAN, Bookseller.
Portsmouth, N. H.—J. W. FOSTER, Bookseller.
Augusta, Me.—WILLARD SNELL, Druggist.
Woodstock, Vt.—J. A. PRATT.
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